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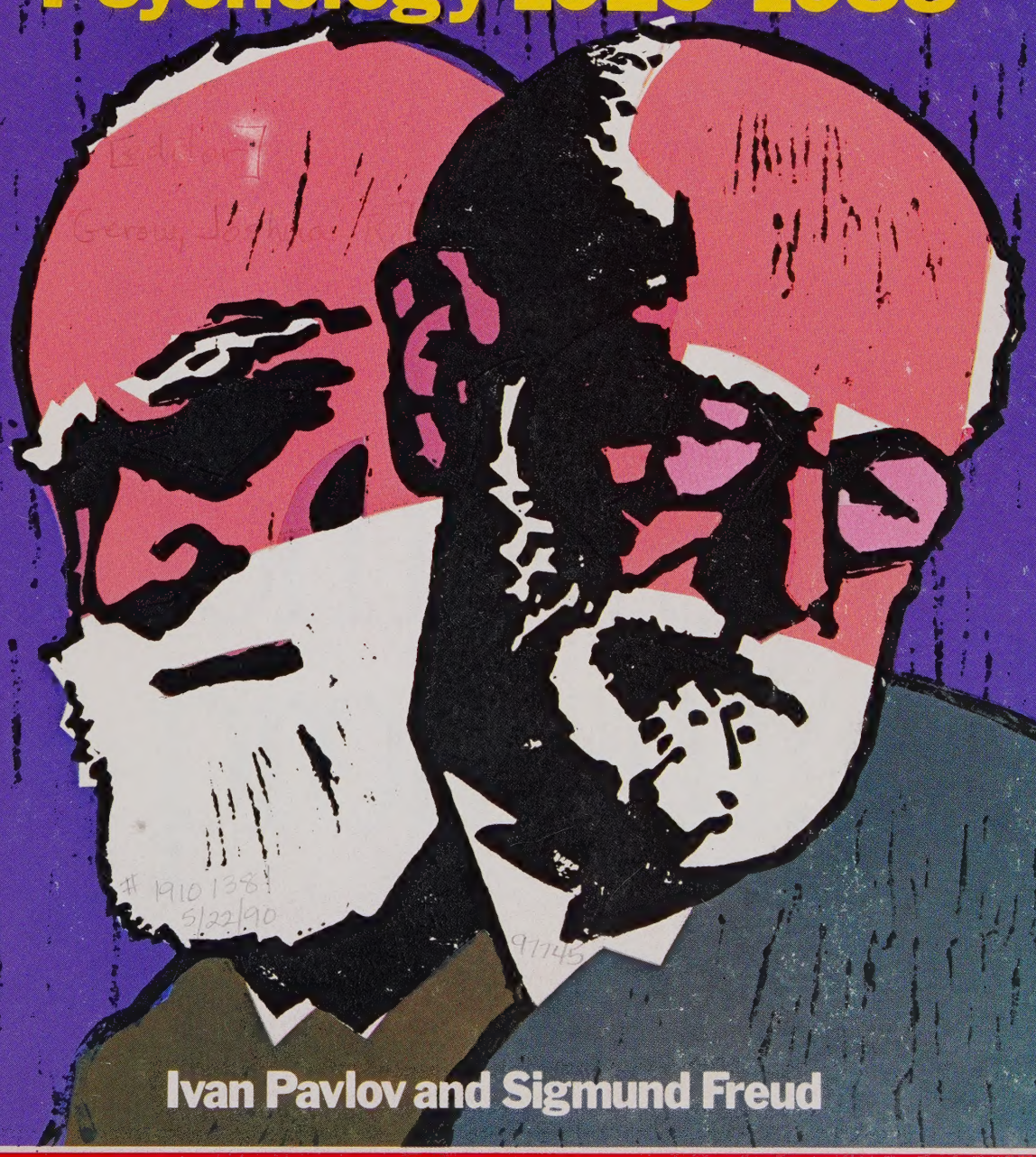

Ivan Pavlov and Sigmund Freud

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"Josh R. Gerow, the Editor/Author of TIME—Psychology: 1923-1988, and Scott, Foresman Publishing are pleased to offer you this retrospective look at Psychology as covered in the pages of TIME Magazine. It is our profound hope that you will find the history of this discipline as interesting and exciting as we do."

Josh R. Gerow
Author of Psychology: An Introduction, Second Edition

Scott Hardy
Editorial Vice President, Psychology
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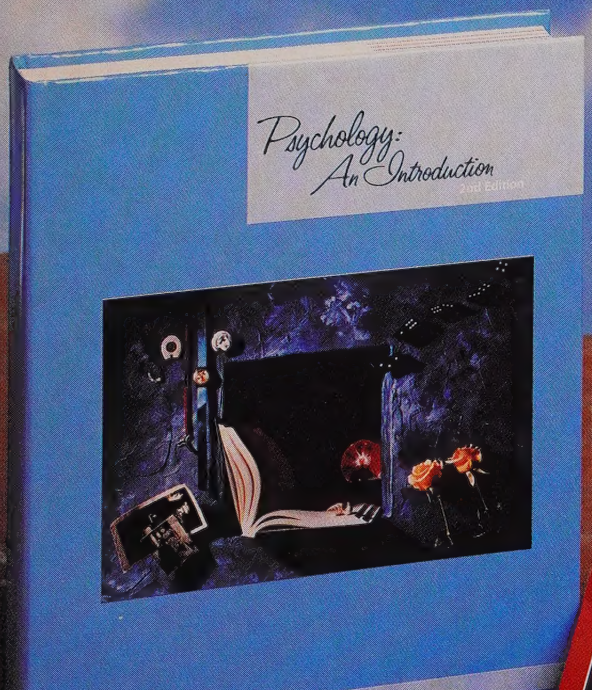

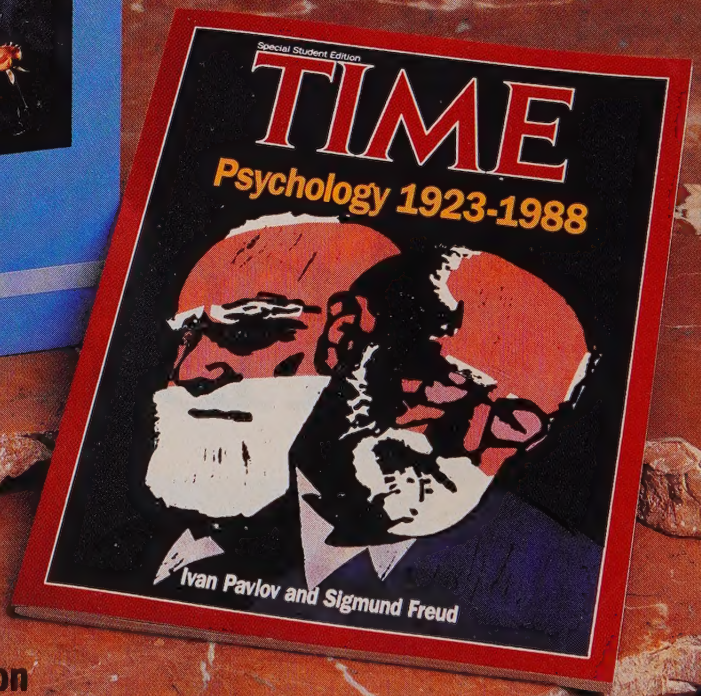

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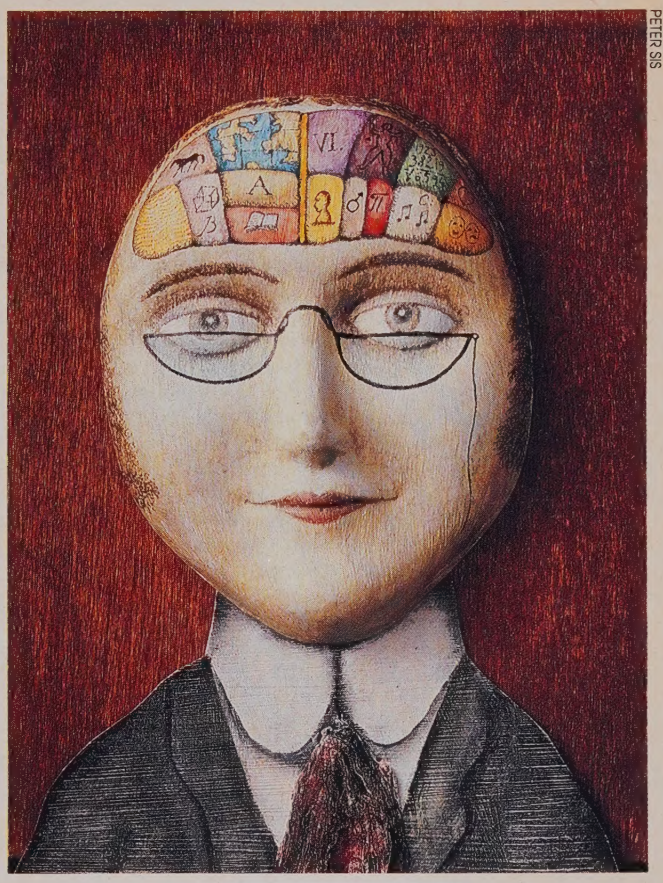

PETER SIS

RETROSPECTIVE

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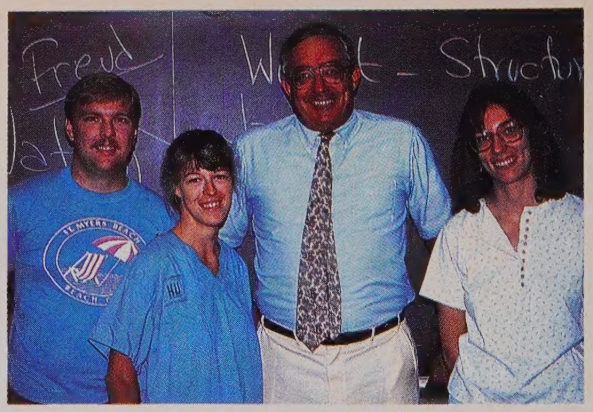
Letter from the Publisher

"How did the press report on Pavlov's visit to the United States in 1923?" "Did the media even mention that the International Congress of Psychology was held in this country in 1929?" These questions arose during Josh Gerow's History of Psychology class at Indiana University-Purdue University at Fort Wayne in the spring semester of 1984 during a discussion of early influences on American psychology. His response was, "I don't know. Let's go to the library and see if we can find out."



Josh R. Gerow and student researchers

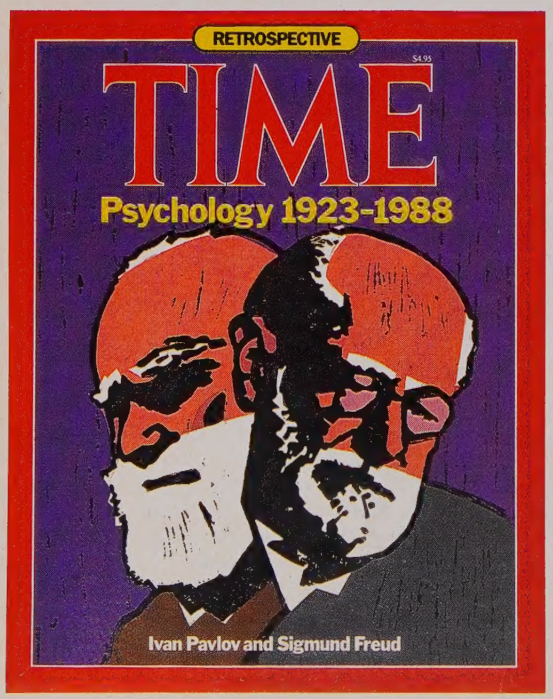
Josh and company discovered that their library contained the complete collection of TIME magazine, dating back to Volume I, Issue 1, March 3, 1923. The search was on. One of the students from that History of Psychology class, Lynn Ostergren, and Josh spent many hours in front of the microfilm reader searching every page of every issue of TIME, looking for any and all articles that dealt directly with psychology. They found more than 400 entries for the period 1923-1932. Two hundred of the most relevant, significant (or humorous) were summarized in a paper they titled, "Psychology Through TIME: The First Ten Years." The paper—presented at the 1985 meeting of the Southeastern Psychological Association—was very well received. Thanks to the enthusiastic support of Jonathan Bulkeley of TIME, and Scott Hardy, Josh's editor at Scott, Foresman and Company, this retrospective of TIME magazine is an extension of that original research paper.

The articles in this issue are organized in chronological order by decade. We have two major sections within each decade. The first consists of a few major articles reprinted in their entirety. These articles were chosen to represent significant, mainstream issues or personalities that best reflect the nature of psychology in that decade. The second section, called SNIPPETS, is made up of a series of shorter, annotated items chosen to convey a sense of the times,or a feel for the "zeitgeist." In this section we have included brief reports on psychological research or theories, obituaries, and a few tangentially related items that are just plain funny.

From my perspective, the intent of this retrospective is to be informative, to be sure, but mostly to be entertaining. We have tried to present a story of psychology, and psychology's past, of the sort that is *not* found in textbooks. In the thousands of articles gleaned from past issues of TIME, we have the raw data for many research projects. This issue presents just a glimpse of the story of psychology past and present as it was reported in the country's first weekly news magazine.

Robert L. Miller

A Journey Through the Mind



This exclusive retrospective is a collection of TIME's coverage of psychology and behavioral science since 1923. TIME brings you the articles–as they originally appeared–with features on Freud, B.F. Skinner, Pavlov, Jung, and Piaget, and commentary on the evolution of modern therapy and psychoanalysis. With landmark case studies in everything from depression, anxiety, eating disorders, and hysteria, to the first behavioristic cure for hiccoughs. This exclusive compilation from TIME is an essential supplement for the student of psychology and required reading for anyone interested in the human mind. It's not available in any store, at any price, and it's yours for just $4.95 from the publishers of TIME. **Supply is limited, so order now.**

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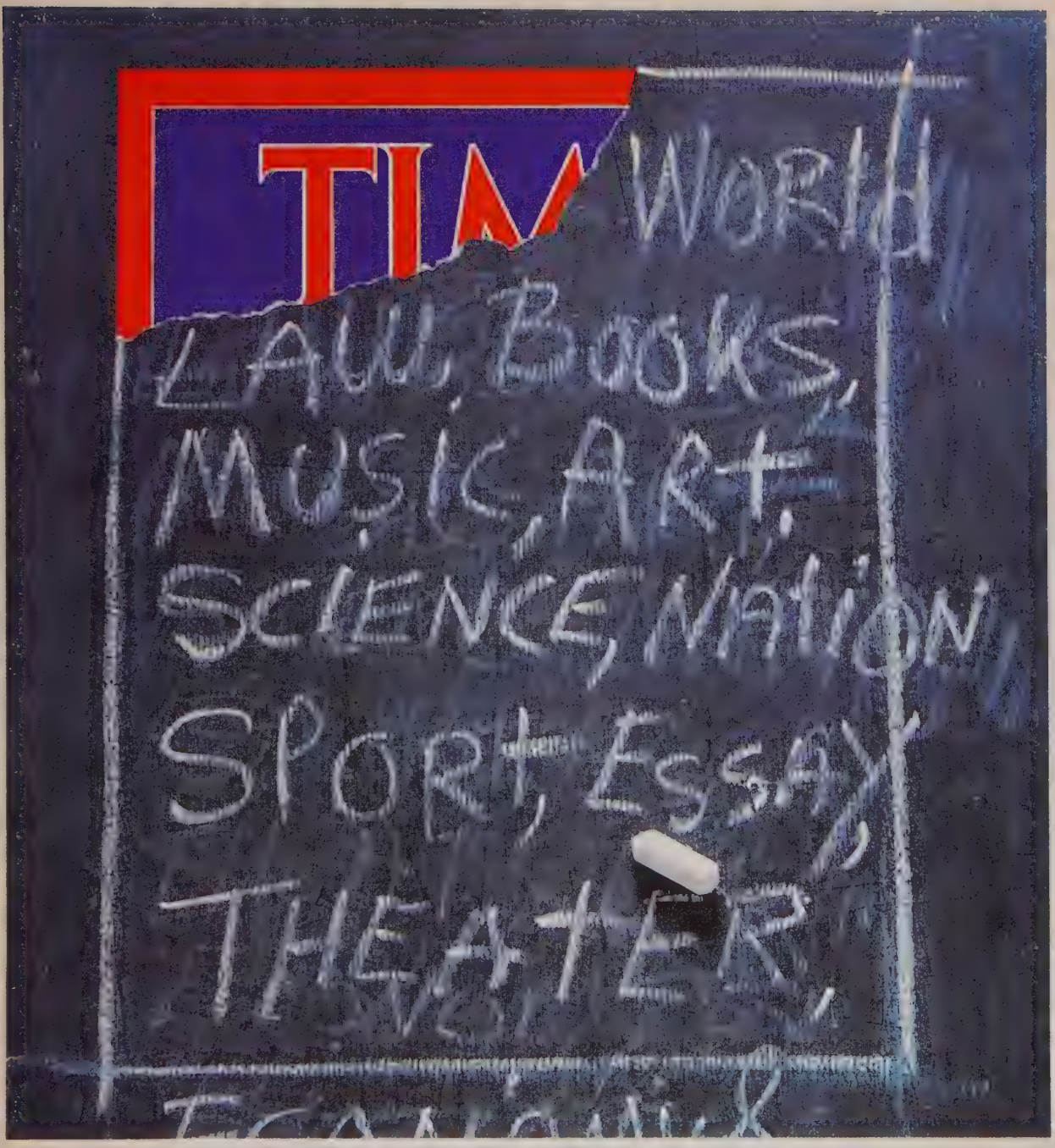

Back to Basics

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TIME

The 1920s

Freudian analysis prevails; Pavlov visits U.S.; International Congress of Psychology meets at Yale; Mother Goose re-examined

The Roaring '20s. The Jazz Age. A rich and decadent decade cut short by years of improvidence come to fruit. Harding's men made waves in the White House with the politics of graft and scandal until Tom Walsh uncovered the Teapot Dome in early '24. While Silent Cal Coolidge napped in the Oval Office, speculation governed the nation and Al Capone organized crime. For the moment America bathed in bootleg gin, dancing the Charleston and speaking easy with all the raccoon-coated gaiety of a nation drunk on unprecedented affluence. Hitler landed in jail. The Marines landed in Nicaragua. In the Kellogg-Briand Pact, 62 nations made a promise many couldn't keep. Further east, something stirred in the matrix of Communism when Mao Tse-tung led an Autumn Harvest Uprising and Stalin killed thousands of critics on his new collective farms. But such issues gave Americans little pause; they turned instead to the pleasant diversion of *The Great Gatsby*, new talkies and Clara Bow. Their carefree lives were financed and fostered by the promise of an ever-strengthening economy until Black Friday shattered the auspicious vision and the nation crossed a dark threshold into the Great Depression.

July 23, 1923

The following account summarizes the basic procedures of Pavlovian classical conditioning. Of even more interest is the report of the visit to the United States of "the most distinguished living scientist of Russia," who was 75 years old at the time.

Pavloff. Ivan Petrovitch Pavloff (Pavlov or Pawlow—take your choice of Russian transliterations), physiologist, Nobel Prizewinner and indubitably the most distinguished living scientist of Russia, sailed from New York for France, July 14, on the *Majestic*, after a series of mishaps that would furnish plot for a

modern *Comedy of Errors*. He had been in America three weeks, but few, even in scientific circles, knew it until he was about to leave. Pavloff has no stomach for publicity. Scarcely had he set foot on our soil, in company with his son, Dr. Vladimir Pavloff, a professor of physics, who studied under Sir Joseph Thomson, when he was robbed at the Grand Central Terminal of $2,000—all his ready cash. The Pavloffs were adopted as guests by the Rockefeller Institute when scientific colleagues learned of their plight, and money was immediately advanced by the Rockefeller organizations and other friends.

Dr. Pavloff's next destination was to have been the Edinburgh Congress of Physiology, which he had been officially invited to address, but the British Consulate in New York refused to visé his passport because subjects of Soviet Russia are not being admitted to the tight little island without special permission from the Foreign Office. Pavloff, being a citizen of Russia, necessarily travels under a passport granted by its government, but he is personally an anti-Bolshevik and takes no part in politics. The French consul was more of a realist, and the professor will probably land at Cherbourg and go home, but not via Edinburgh. Britain, and *not* Pavloff, will be the loser. Commenting on his trying experiences, Dr. Pavloff said he was going back to Russia, where there is "law and order."

Pavloff is 75 years old, tall, white-haired, majestic, active. The son of a priest of the Russian Church, he studied medicine at St. Petersburg, became a military surgeon, and in 1891 was appointed director of the Physiological Institute of the Imperial Academy of Sciences, and later professor of physiology in the University of St. Petersburg. Pavloff founded a new school of physiologists, which became one of the most productive in the world, his researches dealing chiefly with the action of the heart, the secretions of the glands, and the digestive processes. Among his famous collaborators were Bechterew and Popielski. He is now professor emeritus, but still directs his laboratory in Petrograd, with a staff of 30 scientists under him. Despite his opposing beliefs, the Soviet Government has protected him, supported his work, published his collected papers.

Pavloff's name is best known to the Western world for his classic demonstration of the neurological basis of the digestive process in dogs. A normal animal, if hungry, shows increased flow of saliva and the digestive juices at the sight or smell of food. By a simple surgical operation, Pavloff brought the duct of a dog's salivary gland to the surface of the cheek and measured the flow under stimulus of food. At regular feeding times a bell was rung, and after several repetitions it was found that the sound of the bell alone, without food, stimulated the saliva. This process, known as a "conditioned reflex," has been repeated in scores of forms by physiologists and psychologists on both animal and human subjects. It forms the basis of much of modern "behavioristic" psychology, and suggests how reflexes and instincts can be re-educated into new habits of conduct.

In another brilliant experiment, following the investigations of von Bischoff and Heidenhain, Pavloff was able to produce a fistula, or tube, connecting the stomach of a dog with the surface, keeping the animal free from pain and under the most normal conditions possible. By this means he studies the flow of the

gastric and pancreatic juices under varying conditions, proving that the secretions vary in quantity, rate and digestive power with the nature of the food.

Pavloff was given the Nobel Prize for medicine in 1904 for the work embodied in his lectures delivered in 1897 on *The Work of the Digestive Glands*, which has been translated into German, French, English. It has been the inspiration of similar researches by Starling in England and Cannon in the United States. He has received scientific honors and decorations in practically every civilized nation.

August 4, 1924

By 1924, John B. Watson, the "Father of Behaviorism," was no longer a psychologist associated with Johns Hopkins University. Nonetheless, he continued to write about psychological issues, and is here cited as someone who knows about conditioned emotional responses, or what the article refers to as "the terrors of childhood."

Terrors of Childhood. Fear is not inherent in man's nature. It is a defect born of experience, suckled by confusion. A young child can be startled by a sudden noise or loss of support, but it is not of itself ever afraid. The fears of children who see bogeymen in the dark are unnatural, can be prevented. These are deductions from experiments conducted by Dr. John B. Watson and Dr. Bess Cunningham, under the auspices of the Institute of Educational Research, with the purpose of finding a way to break down the terrors of childhood.

When a child, lying awake, thinks he sees a horrifying shape in the corner, or hears all night long in the dark and rain a man go riding by, the direct cause of his fear is always slight. Light huddles the darkness in a queer way, or someone has told him a story about highwaymen. It is only the trick of associating a slight concrete thing with a vast intangible one that makes such fear formidable. The fears of children invariably depend on this sort of confused association, Dr. Watson's experiments have shown.

To ascertain whether infants were susceptible to fear, a snake was shown to 15 children, aged from 14 to 27 mos. Seven betrayed no fear at all; they tried to grasp the snake and play with it or else disregarded it. The eight others showed guarded reactions; only two were afraid. Both were older than any of those in the first group.

To trace the transference of fear from one object to another, a rabbit was given to a child and at the same time an iron bar was banged against a piece of metal. This was repeated. The child confused the noise, which he feared, with the rabbit, made the same response to both. This process of association was also used to effect cures. One baby, long under observation, was afraid of fur or anything resembling fur. The cure consisted of bringing animals into his presence while he ate. A lump of sugar was given to him and an animal brought close at the same time. After a period, his relish of the sugar offset his fear of the animal.

Through such methods, the experimenters approached the problem of banishing the bogeyman. Should they be completely successful, much tearful wailing, much downright agony will be done away with.

FIFTEEN CENTS

TIME

The Weekly News-Magazine

VOL. IV NO. 17 SIGMUND FREUD OCTOBER 27, 1924

Sigmund Freud first appears in TIME

October 27, 1924

Sigmund Freud was often the subject of stories in TIME. The occasion for this piece was the publication of translations of two of his latest works. Freud's picture made the cover of the magazine.

Freud and Freudism. During the past month two new translations of Sigmund Freud made their appearance on U.S. bookstalls.

BEYOND THE PLEASURE PRINCIPLE–Sigmund Freud–*Boni & Liveright* ($1.50).

GROUP PSYCHOLOGY AND THE ANALYSIS OF THE EGO–Sigmund Freud–*Boni & Liveright* ($2.00).

In the first of these, a translation of *Ienseits des Lustprinzips*, the great apostle of psychoanalysis* explores a new realm in psychology. He is comparatively unconcerned with sexual problems; the subject matter may be summed up in the following syllogism:

The ultimate goal of all organic striving is its beginning;

All organic matter progresses in a cycle, absorbing external factors on its way without fundamental deviation from its course;

Therefore, "the goal of all life is death," or, "the inanimate was there before the animate."

Philosophically, it would seem that Montaigne were again speaking to the world in the modern language of psychology.

The second book, a translation of *Massenpsychologie und Ich-Analyse*, discusses the relations of the individual (ego) to the group or crowd; shows how the ego is absorbed by a mass ego, which then acts independently and often in violent opposition to the individual.

The chapter on *Being in Love and Hypnosis*, is a masterly exposition of the transfer of the ego to the object or person loved (distinguished from purely sensual love or, in psychoanalytical parlance, the libido). This transfer is due to mutual influences;

bsence of personal criticism; supreme evaluation of characteris- cs, usually to the detriment of the outside persons; quasi-repres- ion of the sexual passions. Two people in love, therefore, have bsorbed each other's ego. The author then parallels love and ypnosis or, in other words, he calls hypnosis love minus the exual appetite.

The science of psychoanalysis, as Freud explains it, is so ogical in appearance that the gravest error may be made in ccepting its conclusions as great and devastating truths. One and ne, the world is convinced, make two; but add one bad man to ne good woman and the critics will argue forever on the sum. he fact is that psychoanalysis is a scientific method which, efore it can be more generally accepted, will have to wait until nuch more water has flowed under London Bridge.

Career. Sigmund Freud was born of Jewish parents, at reiburg, in Moravia, 68 years ago. At the Sperl Gymnasium in ienna he was always the head of his class. His preliminary edu- ation over, he vacillated for some time between a career in law nd one in natural science, decided much against his will to ecome a medical student and, after a journey to England, entered he University of Vienna, where he did brilliantly.

After leaving the university, he worked for a time in a hildren's clinic, then went to Paris and studied under Dr. Char- ot, the famed neurologist. It was here, to use a paradox, that he ecame conscious of the unconscious mind and proceeded to nake it the sole subject of his studies.

Not long after his return to Vienna, he married a Hamburg girl and had by her six children, three boys and three girls. Freud s said to "owe some of his success to his wife," but in what way s not known.

Character. Fritz Wittels, a student of Freud, writes:** "For a ong time the Freuds lived in Kaiser Josef Strasse...Since 1848, oseph II has been regarded by the liberal bourgeoisie as the fin- st flower of the Hapsburg dynasty: as an exemplar of wisdom, benevolence, progress, and devotion to duty...

"Long residence, during the impressionable years of boy- hood, in a street whose name carries such associations, cannot fail o have an influence! Freud has become an emperor, one around whom legends begin to accrete, who holds enlightened but abso- ute sway in his realm and is animated by a rigid sense of duty. He has become a despot who will not tolerate the slightest deviation rom his doctrine; holds councils behind closed doors; and tries to nsure, by a sort of pragmatic sanction, that the body of psycho- nalytical teaching shall remain an indivisible whole."

Freud once referred to himself as "the only rogue in a com- pany of immaculate rascals."

Pupils. Among Freud's pupils are such men as Adler, Jung, Stekel. It is important to note that Freud quarreled with each. Perhaps the most interesting is Carl Gustave Jung, a Swiss, who became a sort of official expounder of all Freud's ideas; Freud's devotion to him was said to be "altogether exceptional." This state of affairs was not to last long "for Jung has a proud stomach" and he parted company with Freud, to become, like his master, a luminary of the psychoanalytical world.

Doctrine. It is difficult to analyze Freud's doctrine of psy- choanalysis. Is it a science or a philosophy? As there can be no science without a philosophy, it is both. Freud says that injuries are caused to the body by the mind (neurosis); not the conscious mind, for no one is so foolish, but by the unconscious mind. The psychoanalyst's job is, therefore, to bring into the conscious mind those factors which are disturbing the unconscious mind and so cause them to disappear.

The study of the problems of the unconscious mind led Freud o dream interpretation, which was to become the principal method of psychoanalysis. It was the quickest route of reaching a patient's unconscious mind. Freud, in his *Interpretation of Dreams*, goes deeply into the whole subject and, as he almost always uses his own dreams as examples, the book is also an autobiography. In theory, psychoanalysis is the philosophy of the unconscious mind; in practice it is a means by which mental disorders can be cured.

Writings. Freud is an indefatigable worker. Up at 8 a.m. he receives patients until 7 p.m., and from eight or nine o'clock in the evening until one in the morning he does his literary work. His chief books which have been translated into English are:

The Interpretation of Dreams.
On Dreams.
Psychopathology of Everyday Life.
Wit and Its Relation to the Unconscious.
Three Contributions to the Theory of Sex.
Delusion and Dream.
Leonardo da Vinci, a Psychosexual Study of Infantile Reminiscence.
Totem and Taboo.
Psychoanalysis and the War.
Neurosis.

One of the most important works, which has not yet been entirely translated, is SAMMLUNG KLEINER SCHRIFTEN ZUR NEUROSENLEHRS, five volumes.

* Psychoanalysis, according to the psychoanalyst Ernest Jones means the "study of unconscious mentation."
** SIGMUND FREUD–Fritz Wittels–*Dodd, Mead* ($3.50).

March 19, 1928

With the following article—a lengthy one for TIME in the 1920s—we have an excellent summary of classical conditioning. Included is a reference to the article on Pavlov reproduced above.

Conditioned Reflex. Normally dogs snatch at food; elephants reach out their trunks for it. A man will pull his hand away from a hot plate. These are examples of unconditioned reflexes, fully developed in infancy. They constitute the equipment with which the animal faces life, according to the behaviorists.* By modifying the conditions, the simple reflexes may be changed, becoming more complicated, or *conditioned*. The process of changing an unconditioned reflex into a conditioned reflex was clearly demonstrated to an audience of psychiatrists at the Academy of Medicine last week, in a cinema entitled "The Mechanics of the Brain."

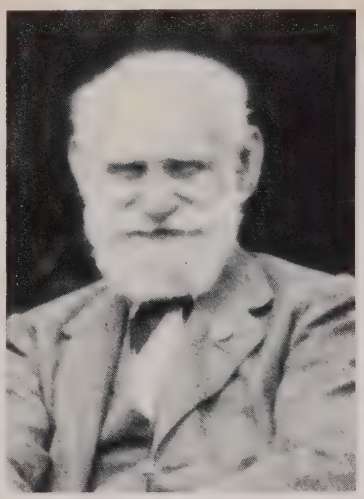
The cinema showed dogs which dripped saliva at the sound of a bell, monkeys which marathoned to the food box at the sight of a red card, children who opened hungry mouths when their wrists were pressed. These are examples of *conditioned* reflexes, and upon this conditioning is based the difference between the lower and the higher animals, including man.

The unconditioned reflex is the simplest nervous reaction. A dog will smell food and turn in its direction. Nature believes in preparedness, and the dog will secrete saliva as he goes for the food. Only the lower parts of the brain are concerned in this reaction. But, if a bell is rung every time the food appears, there will come a time when the dog will secrete saliva at the sound of the bell when there is no food in sight.

The simple reflex has been *conditioned* by the bell; the dog has associated the food with the sound; the powerhouse of the upper brain has gone into action, and the intelligent animal now reacts to *idea*. This is the learning mechanism in its elementary form. If the upper brain is now removed, the learned reaction will be lost.

Not only can animals be taught to associate widely different stimuli, but they can be taught to discriminate. Example:

Old Lady, wise ape, was presented repeatedly and alternately with a red card, and with a blue card. With the red card came, always, food in a food box. With the blue card came the food box but no food. After a while, the food box was removed to a distant corner. Red and blue cards kept flashing before Old Lady's eyes. When the blue card flashed, Old Lady gazed at it in polite boredom and went on quietly with her toilet. They couldn't fool her. But when the blue card disappeared and the red card showed, Old Lady's eyes gleamed. She swung herself from her perch, rushed down the ladder with unladylike haste and made for the food box in the corner.



Ivan Petrovich Pavlov

Here is the rejection of one idea and the acceptance of another; a more complicated instance of learning.

The evolution of the animal depends on the development of the upper brain: the greater the development the more complicated the conditioned reflexes become. The ability to learn by experience, which is simply a matter of conditioning the reflexes, increases; the animal can adjust to ever more varied environments. Man has the most intricately convoluted upper brain of the whole animal kingdom and can therefore adapt himself to a wide range of conditions.

When animals were first studied by the psychologists, their behavior was interpreted anthropomorphically. The knowledge of human psychology was thrown into reverse and the animals were credited with consciousness, introspective, free will, after the German school led by Wilhelm Max Wundt. First to throw brilliant new light on the problem was Ivan Petrovich Pavlov. Son of a priest in a Russian village, he was early confronted with Spirit & Mind v. Matter. Long years in scientific study got him a doctor's degree at the age of 34. Six years later, 1890, he was appointed director of the physiology department of the Institute of Experimental Medicine at St. Petersburg (Leningrad). From then on, his path was undeviating, scrupulous, relentless. His *Work of the Digestive Glands* was crowned by the Nobel Prize in 1904. Having mastered the mechanics of digestion he started speculating on psychic stimulation, the power of suggestion on the lower organs. He conditioned various animals to a bell, to a light, to a color, to the beats of a metronome, and in each case, after appearing with the food a few times, the object itself when presented without food caused the salivary gland to secrete steadily.

The dogs could be taught to discriminate between a metronome beating 68 beats per minute to one having a rate of 200. Food appeared with the 200 rate: nothing happened at 68. After the dog had been conditioned, the metronome was placed near him and started at 200. Immediately saliva dripped into the little tube connected with his salivary gland. The metronome slowed to 68. The dog was no longer interested. Two hundred again and the flow of saliva recommenced.

Pavlov then studied an emotion, pain. A ticking metronome was set beside a dog. Simultaneously he was given a slight electric shock in the leg. This was repeated several times. Finally the metronome alone was used. As soon as it started ticking, up came the paw, the dog's face contracted with pain and he remained in agony until the instrument was removed.

Three years ago Pavlov came to America. Confused by rush and roar he sat for a moment on a seat in Grand Central Station, Manhattan. A small handbag containing much of his money lay on the seat beside him and with characteristic absorption in the seething human laboratory around him, he forgot his worldly goods completely. When he rose to go, the handbag was gone. It had been taken from under his very nose. "Ah, well," sighed Pavlov gently, "one must not put temptation in the way of the needy."

So fundamental are these researches that during the War and the aftermath, when all of Russia existed on starvation rations, Pavlov's laboratory continued to function as in times of peace. There was no bread to eat, but there were test tubes, metronomes, platinum wires, and as Pavlov remarked gratefully "always plenty of paper and pencils to write down experiments."

Pavlov's researches have revolutionized the study of human psychology. Man is now regarded as a higher member of the animal kingdom psychologically as well as physiologically. On account of the greater complexity of the human brain, more types of reaction are possible but the underlying mechanics are the same. The recent work on shell shock has demonstrated what harm can arise from badly conditioned reflexes.

Physiologist Pavlov has reached the point where he can create a nervous condition in animals similar to the nervous states of man which border on insanity. He is now applying his results to the reconditioning of the insane and the education of the mentally deficient.

*The behaviorists claim that all behavior, no matter how complicated or idealistic, is the effect of the environment on the unconditioned reflexes. Chief exponent of behaviorism: John Broadus Watson.

September 16, 1929

TIME often reported fully on meetings of a scientific nature. After the International Congress of Psychology met at Yale University in 1929, the magazine provided a full account. This article provides an informed glance at psychology at the end of the 1920s.

Psychologists. Before James McKeen Cattell became a journalist[1] and a pundit honored among the cognoscenti, he was a teaching psychologist at Pennsylvania and Columbia universities. Apt was his presidency of the International Congress of Psychology at Yale last week and witty, despite length, his speech of welcome. Said he: "In so far as psychologists are concerned, America was (prior to the last 50 years) like Heaven, for there was not a damned soul there." Another Cattell truism: "The motions of the solar system since its beginning are less complicated than the play of a child for a day." A Cattell social irritant, which excited dark newspaper headlines: "The objects of the sciences are more ideal than the objects of the churches; their practices are more Christian. When in the fullness of time there is a family of the nations, when each will give according to its ability and receive according to its needs, when war among them will be as absurd as it would now be for members of this congress to begin murdering one another,[2] this will be due in no small measure to co-operation among scientific men of all nations in their common work."

Yale's President James Rowland Angell added amen to these idealistic sentiments, and the sessions went on.

Happy Folks. Peter Pan's happy light flitted about Columbia's Teachers' College. Professor *Goodwin Barbour Watson* there trapped it under the lattice bushel of his studies. "In general," said he, "the happy student is likely to be a healthy, popular, married man who thinks that he can tell a joke well, lead

discussion, act in a play, talk on sex, or lead a group...He has had a harmonious home, enjoys his job, prefers adventure to peace, responsibility to direction. Not essential to happiness are intelligence, race, nationality, self-support, religious participation, ability in algebra, cleverness in writing poetry."

Personality. Physique, dress, manners, quality of voice, choice of language and characteristic social relations all go to make your personality. But they are useful only to the extent to which they affect the people you come in touch with. Thus decided Yale's *Mark Arthur May*, trying to develop a scale to measure personality. Zero would be a person who does not count for anything to anyone. High grade would be he whose presence or absence has the greatest influence on others.

Born Criminals do not exist, said George Washington University's *Fred August Moss*. But many a person has tendencies which predispose him to crime, *viz.*, epilepsy, paranoia, paresis, dementia praecox, senile dementia. Small-town children are less apt to become criminals than children of large communities, added Columbia's *Hugh Hartshorne*. A friendly classroom atmosphere is one of the most powerful influences on child character. "Moving pictures do not contribute to delinquency," said Philadelphia's *Phyllis Blanchard*. "I have sat in motion picture theatres and marveled...When the villain is caught, as is always the case under the policy of those who make American motion pictures, the applause of the children is swiftest and most enthusiastic."

Masculinity-Femininity. Men are not entirely masculine, nor women entirely feminine, proclaimed the late Otto Weininger, brilliant German who blew out his brains at 24, just after appointment to Harvard's faculty. At Stanford University, *Lewis Madison Terman* sought ways of measuring sex variations and found 908 points on which men and women differ according to their interests, trends, emotional reactions, preferences, aversions. One out of 100 men, he found, is more feminine than the average woman, one woman out of 100 more masculine than the average man. The sexes overlap in their traits. Living with a woman for a period of years accentuates a man's feminine characteristics. Few men can resist the trend. Excessive "mothering" or "fathering" a child greatly influences adult sex expressions.

Racial Equalities. Although the U.S. immigration furor over better racial stocks has subsided, interest in racial superiorities continues. National Research Council's *Otto Klineberg* found slight differences in the intelligence ratings of German, French and Italian children (Nordics, Alpines, Mediterraneans). City children of the three types were smarter than the corresponding country children. Nor did Vanderbilt University's *Lyle Hicks Lanier* find sharp differences between Negro and white children, or New Zealand's I.L.G. Sutherland between primitive (Maori) and civilized adults.

Genius. "Safe & Sane may also mean commonplace, unenterprising," said New York's *Joseph Jastrow*, speaking again. Few who lead significant lives are hopelessly sane. A genius is a deviate from the normal. In deviation there is hope, strength, unique value. Much of the most important work of the world has been done by men who have paid the penalty for their achievements in terms of their handicaps. Men are more susceptible to neurasthenia than women, women more prone to hysteria.

Cults. Belonging to a cult is an evidence of abnormal mentality, found Smith's *William Sentman Taylor*. Belonging "reveals simplicity and mental inertia, the tendency to follow leaders and crowds, lack of critical faculty, especially experimental."

Hallucination and Religions. More women suffer from religious hallucination than do men, at least in the Chicago experiences of George Washington University's *I.C. Sherman*. As many institutionalized Jews as Roman Catholics have paranoidal trends. Protestants suffer less so. Every third Protestant, every fourth Catholic, every seventh Jew has hallucinations. Half of the Protestants, one-fourth of the Catholics, none of the Jews had *religious* hallucinations.

Smart Goldfish. Goldfish are smart enough to go to the nearest food supply, found Kansas University's *Raymond Holder Wheeler* and *T.J. Perkins*, who tried to fool the fish.

Magazine Make-Up. Readers remember advertisements whether they are all bunched before and after editorial text or scattered through, reported Ohio State's *Harold Ernest Burtt*.

Motion Pictures help children remember their lessons, help stupid ones get as good marks as those who ignore pictures.—Yale's *Daniel Chauncy Knowlton* and *J.W. Tilton*.

Pavlov. Ivan Petrovich Pavlov's venerable appearance at Yale's International Psychological Congress was no anticlimax to his visit at Harvard's International Physiological Congress (TIME, Sept. 2). The psychologists showed the old gentleman great respect. Though they knew of him only at second hand (through the behaviorists), though he spoke in Russian and in highly technical terms on "A Brief Sketch of the Highest Nervous Activity," they applauded him tremendously before and after he spoke. He said that he felt justified in separating certain reflexes, as food, sex, defense, from the rest of nervous activity.

Ape Colony. In New Haven's Prospect Street, behind a high wall and adjoining the gardens of the learned community's Victorian moguls, is a monkey house. No uncouth student ever annoys the beasts for they are the wards of *Robert Mearns Yerkes*. He, who made a Harvard reputation studying the behavior of the dancing mouse,[3] has for the past five years been discreetly studying anthropoid intelligence for God, for country and for Yale. No simple task has that been, especially since apes do not behave normally in captivity. To study them as best he could he once spent three weeks at Havana where a Señora Rosalie and a Señora Abreu have colonies of simians. Professor Yerkes' *Almost Human* (TIME, Dec. 14, 1925) reported his observations on ape intelligence. *Chimpanzee Intelligence and Its Vocal Expressions* is a related study. Last week he was in Africa collecting specimens for a purpose which Yale's President *James Rowland Angell* reluctantly (for fear of meddlesome publicity) told the psychologists. That purpose is no less than to establish an anthropoid farm in Florida, where Professor Yerkes will spend most of his time comparing simian and human emotional and mental processes.[4]

1. Editor of Psychological Review, Science, Scientific Monthly, American Naturalist, School and Society, American Men of Science.
2. Heedless reporters thought he referred to the U.S. Congress. The 1923 International Congress of Psychology was the first scientific congress after the War to which all nationals were invited on equal terms.
3. In 1907, before the deaths of Harvard's Eliot, James, Munsterberg, Royce and Palmer, and the departure of George Santayana for his native Spain, ended Harvard's primary in philosophy and psychology.
4. Unique only for the U.S. is the Yerkes plan. At Tenerife I., Canary Islands, the German Dr. Wolfgang Kohler conducted similar researches until the War disturbed him. At Kindia, Africa, the Pasteur Institute is directing very discreet efforts to cross apes and humans (TIME, April 8).

Snippets

Short articles and excerpts from TIME's coverage of psychology through the 1920s

May 5, 1923

And we think we have problems with students on college campuses today! The first quote is a complete item titled "Matrimonial Mania." The sec-

ond, which follows immediately in the same issue, is titled "Dateless Nights."

Syracuse University has adopted a dry-land rule whereby the marriage of a student automatically cancels his or her connection with the university. The rule, which is in accordance with the statutes of other universities was adopted as a restriction upon the "matrimonial mania" which is said to have been devastating American universities since the war.

Gershwin, 1925

...Northwestern is to take less heroic measures to the same effect. Representatives of the fraternities and other groups of male students have agreed to join the young women in celebrating three dateless nights each week. The colloquialism "dateless" is not to be understood in the poetic sense. The young men are said to expect a resultant advance in scholarship and, incidentally, more conference championships.

July 16, 1923

What determines the sex of an offspring? In the early 1920s, the answer to this basic genetic question remained buried among hundreds of theories. The "dominant one" at that time gaining favor was reported in the late summer of 1923. Nowhere in the article is there any mention of Y-chromosomes.

They say there is a special chromosome... called X–or accessory chromosome, which is found in half the spermatozoa of male animals. This is present in addition to the regular number of chromosomes, which always occur in pairs (48 in man), thus giving rise to the uneven number. Ova, on the other hand, invariably have two X-chromosomes. Eggs fertilized by spermatozoa containing the X-element (thus giving the product a double dose of X's) become females, and others, males.

December 10, 1923

The inheritability of acquired characteristics has long been, and continues to be, a very controversial issue. The controversy made the pages of TIME when Viennese Biologist Paul Kammerer visited the United States, aware that American scientists would dispute his claims as unfounded, but willing to try to convince them nonetheless.

In interviews he has made several rather romantic statements regarding the pliability of human and animal nature as deduced from his experiments. His general position is: "Our descendants will learn more quickly than we will what we know well; will execute more easily what we have accomplished with great effort; and will be able to understand what has injured us almost to the point of death." Specifically:

■ Future generations of Americans will be born without any desire for liquor if the prohibition law is continued and strictly enforced.

■ Animals adopt the structural formation of the surroundings in which they live for several generations. For instance: the octopus adopts the same texture as the sea bottom, the grasshopper assumes the characteristics of a blade of grass.

■ A Negro child brought up in Europe bleaches perceptibly, and descendants of such transplanted Negroes take on the skin color, skull dimensions, straight hair of white men, while Europeans living in Africa develop in the reverse direction.

January 7, 1924

Poignant statistics can be found in a brief item from the NEGROES column. Its title: "Less Lynching."

In the epitaph of the late Year 1923 must be written that it saw less than half as many lynchings in the U.S. as its predecessor, 1922. There were 61 lynchings in 1922; only 26 last year...

Of the 26 victims, one was a colored woman and two were white men. Seven were accused of attacks on women. "Other offenses for which lynchings occurred include mistaken identity, aiding in escape, associating with white women, being in an automobile accident...frightening white children, etc."

May 5, 1924

The death of G. Stanley Hall, one of the greatest American pioneers in psychology, is noted in a rather lengthy obituary, here in its entirety.

Granville Stanley Hall, President Emeritus of Clark University (see MILESTONES), may be remembered more as an educator or a divine than a scientist, but science will never be able to repay the debt it owes him. He did two supreme things:

1) Brought the science of psychology in America almost singlehanded out of the miasma of metaphysics into the clear white light of experimental rationalism. Pupil of Wilhelm Wundt, he caught the physiological genius of that great founder, and built his theory strictly on the neurological basis of the human body. Hall's wide-ranging, liberal and incisive intelligence took him into many special fields. It made him the dean of the genetic psychologists, with a sympathetic and encyclopedic knowledge of infancy and adolescence (the subject of his greatest work). It distinguished him in the comparative psychology of animals. He was the first American psychologist to give any credit to psychoanalysis, and though always critical of its pretensions, he brought it sharply to the attention of the scientific world by inviting Freud, Jung, Jones, Ferenczi, Brill and other leading psychologists of Europe and America to a conference at Worcester in 1907, at which they fraternized with James and other leading academic psychologists. Hall wasted no time striving for perfect psychological orthodoxy, and was sometimes a bit under suspicion with his colleagues. But his mind was always open, he trained and inspired many of America's first rank psychologists today, and to the end he maintained a lively curiosity for all schools and views.

2) As first President of Clark University, called from Johns Hopkins in 1887 to organize it, he built the greatest research faculty in America, comparable only with Hopkins. With his Continental university training, he saw the need for intensive graduate work in the sciences, and he gathered together in a few famous departments a galaxy of great minds scarcely yet duplicated in our leading universities. They included Michelson and Webster in physics, Whitman in biology, Chamberlain in anthropology, Blakeslee in international law, Sanford in psychology. Hall was not only the moving spirit in assembling them, but he was their direct inspiration to a new and higher type of university product, giving them the facilities, appreciation and moral support that are the life blood of scientific achievement.

Dr. Hall's last book, *Confession of a Psychologist* (Appleton) is the unique revelation of the mind of one of America's greatest men–at 77 years of age, a mind of complete candor, fearlessness, humanity.

July 14, 1924

The congenital basis of hypertension

s supported by data from a team of octors at Peter Bent Brigham Hospial in Boston, according to an item alled "High Blood Pressure." Predictors of hypertension are also noted, ncluding some that are clearly psyhological in nature.

he figures demonstrate conclusively, ney believe, that a family history of heart, idney and brain disease is twice as comnon in a patient with high blood pressure s in the ordinary patient who has not a igh blood pressure.

It was also found that from the ages of 0 to 20, patients who later have high lood pressure are likely to be nervous, emperamental; have frequent nose bleeds, eadaches, cold, sweaty hands; flushing, lushing and extreme sensitiveness.

anuary 12, 1925

n unusually long article (nearly a full age) takes nursery rhymes and Mother Goose to task in a rather ongue-in-cheek exposé. Some of the ointed observations include the following.

ast week one Mrs. Winifred Sackville Stoner Jr. permitted herself to be interviewed by newspaper reporters about a book she was just completing to set forth he "unquestionably" evil influence exerted by popular nursery jingles upon infant minds. Mother Goose herself was the object of Mrs. Stoner's determined attack nd the reporters were told in no uncertain ones that: *Simple Simon*, meeting a ieman and making a request the economic premise of which was visibly fallacious, "glorifies stupidity."

Little Jack Horner, sitting in his corner and eating with his fingers, inculcates bad table manners.

The spider in *Little Miss Muffitt* and he lupine ancestress in *Little Red Riding Hood* breed fear-complexes.

August 24, 1925

In an attempt to provide some practical assistance to "wailing overanxious parents," Dr. E.J. Huenekens addresses two areas of concern in the *Journal of the American Medical Association*: sleeping, and eating new foods. TIME picks up on his advice. On eating new foods the doctor suggests (from a rather long list) that parents consider the following.

Give only a small amount of food the first time, gradually increasing...Do not call attention to the fact that the food is new or the possibility that the child may not like it...In case of an only child, a "party" helps him eat. Many families get together only at meal time, and therefore meal time should be a happy time...Set it before him and make him sit at the table until he eats it all, no matter how long it takes...Force is necessary for children who spit out their food or those who vomit at will. Give such a child a small amount of food; if he vomits give him more; continue until he keeps the food down. When he learns that you know his trick, he will stop.

November 9, 1925

We don't know yet–with any certainty–just how many cells make up the human brain, but in 1925 Dr. C. Judson Herrick, a University of Chicago neurologist, was willing to state his estimate. He went on to offer other insights.

There are 9,200,000,000 cells in the human cortex. In the process of thought, one of these cells combines with ten others, and so on through a possibility of combinations expressed mathematically as 10 to the 300,000th power.

An egg-shaped, humped or square head is not necessarily an indication of low brainpower. Many slant heads belong to fine thinkers.

Big feet and big ears indicate an amiable temperament and have some mysterious connection with the brain.

Facial expressions are deceptive.

August 16 and August 23, 1926

At two successive meetings of the British Association for the Advancement of Science, Psychologist William McDougall put on a demonstration using rats. Both occasions were included in TIME's reports on the meetings, and are here presented in full.

McDougall's Rats. At the end of the series of lectures and demonstrations by Dr. William McDougall of Harvard, the latter's admirers were ejaculating that he had marked a turning point in Biology. He had exhibited rats from two strains, sprung originally from a common stock. One strain had been trained through several generations, the other left uneducated. In all manner of tests–diving, swimming, climbing, prying, escaping–the trained dynasty was quicker-witted than the untrained, proving that mental attitude in a given direction can be intensified by breeding. "As with rats, so with men."

Rat. Dr. William McDougall, onetime Oxonian, now Harvard's pre-eminent psychologist, demonstrated what an intelligent creature is the rat. Into a box with 14 latches the speaker put some cheese. Sniff, scratch, scrabble–plop, and in went a white rat, all the latches flapping open after him, to nibble contentedly. Spectators cheered.

January 9, 1928

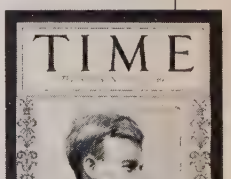
A major address at the 36th annual meeting of the American Psychological Association at Columbus, Ohio, was delivered by Dr. Karl Spencer Lashley of the Chicago Institute of Juvenile Research.

After he had taught rats to work out certain problems, he said, he cut away portions of their brains. Although he removed from 1% to 81% of a brain the rats still were able to solve problems, only with the greater loss of brain they thought more slowly. Dr. Lashley reasoned that no one section of the brain controls mental functions such as the ability to learn or retain knowledge. He did not controvert the fact that different portions of the brain do control muscular action in different parts of the body.

August 19, 1929

Here is an account of a (behavioristic) psychological "cure" for the hiccoughs–perhaps the first thoughtful use of counterconditioning as therapy.

For 59 days one Vera Stone, 18, Tennessee girl, hiccoughed. She acked, ecked, icked, oocked, ucked until she nearly died. Her diaphram jerked until it ached and her arms and hands went numb...Last week one shrewd doctor decided that she had hiccoughed so long she had forgotten what it was like *not* to hiccough, was therefore psychologically incapable of helping herself. He gave her a strong nauseating drug, put her to sleep. When she awoke her mind so occupied with her new counter-irritating misery that she forgot to hiccough, was cured.



Lindbergh, 1928

The 1930s

Freud's life reviewed; nervous breakdowns explained; shock therapy introduced; NYC teachers labeled hopelessly insane

Americans entered a decade of disillusionment shivering in the Hoovervilles of the Great Depression, and the banking system fell like a house of cards on the unlamented president's last day in office. F.D.R cooked a New Deal and served up an alphabet soup of legislation from the CCC to the AAA in his historic first hundred days. Still, suicide rates soared, laborers struck, and American spirits hit bottom when the Hindenburg went up in flames. While Benny Goodman, boogie-woogie, Sally Rand and legal liquor helped distract the denizens of a disenchanted nation, Hitler made his bloody ascension to power overseas. Death camps swelled with the victims of anti-Semitism. The Rhineland and Austria lost liberty to the Wehrmacht. The Axis nations stood united. And in the blitzkrieg that provoked the Allied forces, the mercenaries of the "master race" marched into Poland beginning the world's most costly war.

June 19, 1933

There have been many attempts since, but the first effort to raise a chimpanzee as if it were human, and to try to teach a chimp to use language was that of W.N. Kellogg and his wife. They raised Gua along with their son Donald. Here is the full account.

Babe & Ape. An experiment of bringing up an infant ape under identical conditions with a human infant was reported in outline last year by Winthrop Niles Kellogg, associate professor of psychology at Indiana University (TIME, May 23, 1932). Last week Dr. Kellogg, with his wife collaborating, detailed in a book* their curious stunt, the fun and trouble they had.

Professor Kellogg conceived the experiment when he was at Columbia University, six years ago. After he secured his Indiana post and other psychologists applauded the idea, the Kelloggs agreed to have a baby to companion an ape. Their boy, Donald, was born Aug. 31, 1930. His parents at first wanted to take him to Sumatra to find a foster brother or sister among the orangutans. But they lacked the money. No U.S. zoo would loan them an infant ape. The Kelloggs felt frustrated until Professor Robert Mearns Yerkes, Yale's ape expert, offered to loan them Gua, 7½-month-old, tan-faced, brown-eyed, black-haired female chimpanzee, born to healthy inmates of the late Señora Rosalie

breu's ape colony at Havana. The Kelloggs took a bungalow ose to the Yale Anthropoid Experiment Station at Orange Park, a. and thereafter Gua and Donald, who was 10 months old, ved precisely similar lives.

From 7:00 a.m. to 6:30 p.m. the Kelloggs were incessantly ccupied with the children, dressing, feeding and cuddling them. aily it was necessary to weigh, measure, test, photograph, ob- rve and teach them. Gua could not learn to speak human words, though she has the necessary apparatus and tried to use it. earest she came to a word was to pout her lips in effort to say Papa."

Gua learned to walk upright more quickly than did Donald. lthough both had walking carts to aid them, Gua used hers only or play. She preferred to proceed by hanging on to Professor ellogg's trousers, walking between his legs. When Donald tried imitate her in this form of walking, he, being taller, kept umping his father behind. Gua, while walking thus, kept perfect ep with Professor Kellogg, unless he went too fast. In that case he would make skipping hops until in step again.

Gua liked to pull at every kind of hanging–curtains, table- loths, ropes, visitors' skirts. She recognized people by their lothes better than by their faces; by the smell of their chests and rmpits better than by their clothes. Donald recognized faces adily. Gua was fond of poking her fingers in people's mouths. onald liked to tweak noses.

Gua taught Donald to bite walls and people, and to peek nder doors. Gua's many teeth were blunt and so hurt less than onald's few. Gua hated perfume and asafetida; Donald liked erfume. Both reacted similarly o sweet, salty and bitter sub- tances. Gua, however, liked our things. Gua was more tick- ish than Donald, frequently ickled herself for pleasure. Gua as first to recognize herself in mirror, first to show interest in he pictures in a book.

At the end of nine months he Kelloggs demonstrated that nvironment, particularly psy- hological environment, is nec- ssary for the development of an ndividual's inherent abilities. Gua, treated as a human child, ehaved like a human child ex- ept when the structure of her ody and brain prevented her. his being shown, the experi- ent was discontinued. Donald ent with his parents to Indiana niversity at Bloomington, and Gua after "a gradual habituating rocess" was returned to Professor Yerkes to learn the prison life f other U.S. chimpanzees.

The Ape and the Child-Whittlesey House ($3).

Mrs. Kellogg & Donald — *He liked to tweak*

Mr. Kellogg & Gua — *. . . she to poke.*

April 15, 1935

The term "nervous breakdown" is still very much with us. Even in the early 1930s, it was recognized that there was no such disorder. The following—rather technical piece—makes that clear.

Nervous Breakdown. Medically there is no such thing as a nervous breakdown. But when a successful businessman, af- er meeting a series of setbacks, develops crotchets and then sud- denly goes to pieces, even his physician will call his condition a nervous breakdown. Technically the businessman is suffering from a neurosis. He is not mad. Nor is he apt to go insane. His inability to cope with people and circumstances has thrown him into a complex mental-emotional turmoil and shaken his entire personality. With a patient, learned psychiatrist as his guide he may clamber out of the debacle and regain a stout hold on life. But the paths he takes must be peculiarly his own, for psychiatrists have not mapped all the badlands of the neuroses. Some of the primary facts of what passes for a nervous breakdown, the April issue of FORTUNE, with the help of eminent psychiatrists, ably sets forth for laymen.

Neuroses do not always explode into nervous breakdowns. Habitual stammering, scratching the nose, twiddling, scolding or recoiling are signs of trouble in one's personality and serve as safety valves. If such signs of nervousness continue for a long time a neurotic disease is almost certain to develop. Among such groups of ailments are:

Neurasthenia or nervous prostration. The victim feels mentally and physically tired. He is lazy, cannot force himself to work. The neurasthenic often suffers aches and pains in various organs. The pains are real to the neurasthenic, but his doctor can find no physical cause for them.

Hysteria. A hysterical person may show every physical sign of every disease that ever afflicted mankind. A hysterical virgin may swell up as if she is about to bear a baby. A hysterical man's hand may shrivel as if palsied. Amnesia is a form of hysteria.

Psychasthenia. This is the only type of neurosis which shows no physical symptoms. The victim is ridden by an obsession of which he is aware but which he cannot control; otherwise he can think clearly. Some psychasthenics cannot avoid stepping on the cracks of sidewalks or washing their hands every few minutes. Among psychasthenics are claustrophobes, who fear enclosed spaces; agoraphobes, who fear open spaces; acrophobes, who fear high places; zoophobes, who fear animals; siderodromophobes, who fear locomotives.

Anxiety states are the commonest of all neuroses. The patient is in a continuous condition of fear, physically and mentally. His heart palpitates; his limbs are weak; he cannot digest his food; he sweats easily; he gets out of breath. Mentally he is often the victim of one of the foregoing phobias. Dr. Sigmund Freud believes that anxiety states are always caused by sexual frustration. But, says FORTUNE, "most psychiatrists would also include financial worries, domestic friction, and other non-sexual causes. In some ways an anxiety state resembles an acute neurasthenia."

Objective Factors: In their groping for causes and conditions of nervous breakdowns physicians have isolated these objective facts:

Children, as well as adults, may suffer nervous breakdowns. Overwork does not cause them, although it may precipitate an attack. There is nothing in the popular idea that only the wealthy have breakdowns. Nothing has yet been definitely established as to the role of heredity in causing neuroses. In general more highly developed personalities tend to develop neurotic quirks, more primitive personalities to go really crazy. Small-town and farm people are as prone to have breakdowns as are big city people. The Depression, except for increasing the U.S. suicide rate, has so far caused no striking increase in the number of U.S. nervous

breakdowns.

Treatment of nervous breakdowns is called psychotherapy. There are two primary methods:

Suggestion, "which injects a psychological antitoxin into the patient's mind to drive out the mental infection."

Psychoanalysis, "which digs down to the hidden cause of the infection and sterilizes it by exposing it to the sunlight of the consciousness."

Chief divergence: "Psychoanalysis aims to discover the causes back of the symptoms and must do that to be successful, whereas suggestion, not directly concerned with 'why,' simply commands the symptoms to disappear, ignoring the causes. If the patient believes strongly enough in the doctor or the treatment, suggestion may work." Hence the successful cures accomplished in special neurotic cases by Christian Science, Buchmanism, Seventh-Day Adventism, and Couéism. Psychoanalysis "may uncover entirely too much for the patient's peace of mind. Cures by suggestion, on the other hand, are often superficial, depending on constant renewal of the suggestion to avoid relapses."

Doctors who treat nervous breakdowns generally agree that the foremost U.S. authorities in their field are:

Dr. William Alanson White, 65, No. 1 U.S. practicing psychiatrist, longtime head of 5,309-bed St. Elizabeth's Hospital in Washington.

Dr. Adolf Meyer, 68, No. 1 U.S. research psychiatrist, Switzerland-born, head of Johns Hopkins' Henry Phipps Psychiatric Clinic since 1910.

May 2, 1938

In TIME's Education section, in 1938, we find this article—with the rather curious title "Mind Cracked." It has something to say about the concept of IQ in general and does a very nice job of describing Thurstone's Seven Primary Mental Abilities.

Mind Cracked. Modern psychology leans to the theory that the human mind is a piece of machinery, which can be measured by the way it acts on raw material. Thus the psychologists feed into the machine a set of questions called an intelligence test, lump the answers together as one product and weigh it, labeling the weight the IQ But one school of psychologists, believing the IQ is too crude a measure (like lumping apples, oranges and bananas all together and calling them fruit), has been trying to break up the mind into its separate parts. Last week the most eminent investigator in this field reported some significant findings.*

Big-eared, sandy-haired Dr. Louis Leon Thurstone is a mathematician as well as a psychologist. Scorning the vague, wordy theories of most psychologists, he likes to reduce psychology to mathematical formulae. Once Thomas Edison's assistant, he devised trade tests for the U.S. Army during the war, taught engineering at the University of Minnesota and psychology at Carnegie Institute until 1923. Since then he has been at the University of Chicago and last week he was made head of its famed psychology department. He has been president of the American Psychological Association, his intelligence tests are used in many a U.S. school, but though his name is widely known, few people, even on the Chicago campus, have ever seen Professor Thurstone. With his dark-haired wife, Thelma, who collaborates in his research, he works constantly in his narrow office and his laboratory, hopes his three boys will all be scientists.

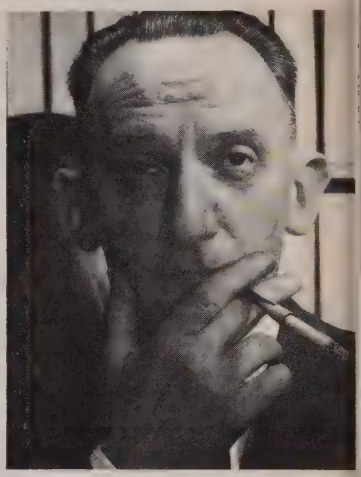
For six years Dr. Thurstone, like a biochemist isolating vitamins, has been cracking up the human mind into its primary functions. He started with a tentative list of about half-a-dozen theoretical functions, created a set of 56 tests to probe them. Samples:

■ Synonyms, anagrams: to test ability in the use of words.

■ Disarranged true & false sentences: "large is an beast ant a"–to test perception.

■ Tests of verbal reasoning: All pigs can fly, and all elephants are pigs, therefore all elephants can fly. Answer: the argument is correct.

Some radishes are rumble-seats, and some rumble-seats sing soprano; therefore some radishes sing soprano. Answer: False (because the rumble-seats that sing soprano may not be radishes).



Psychologist Thurstone
Some rumble-seats sing soprano

Dr. Thurstone gave his 56 tests to 240 students whose IQ's were above average. But when the students had answered the questions, Dr. Thurstone's work had only begun. He proceeded to compare, analyze and plot the scores, to sift out, with exceedingly complex mathematical formulae of his own invention, the separate mental abilities he had measured. He found seven: ability in 1) numbers, 2) words, 3) visual imagery, 4) memory, 5) perception, 6) induction (finding a rule governing a set of facts), 7) verbal reasoning. Dr. Thurstone also isolated two additional factors that he was unable to identify definitely but tentatively called deduction and problem solving. The fact that his findings did not quite agree with his original theories seemed to Dr. Thurstone proof of the validity of his tests. He had expected to find only one verbal factor, actually discovered two-word fluency and verbal reasoning.

Dr. Thurstone's tests furnished scientific evidence that while people who rank high in one mental ability are likely to score well in the others, frequently an individual may be strong in one faculty, weak in another. Thus people of superior intellect sometimes have poor memory. An individual may have a good memory for faces and a poor one for names, or vice versa. In the one case he ranks low in ability with words; in the other, he is deficient in visual imagery.

Significant was Dr. Thurstone's discovery that the work people like to do is likely to correspond with their particular mental abilities. One of his students who ranked high in verbal abilities planned to go into advertising and writing, while a student who scored high in perception but low in solving problems wanted to be an actor. Dr. Thurstone concluded that his findings not only made the general intelligence test obsolete but had two profound implications for education: 1) His tests will make it easier to find the occupation for which an individual is fitted, 2) It may be possible to train and improve the particular mental abilities in which an individual is weak.

**Primary Mental Abilities*, by Louis Leon Thurstone (University of Chicago Press).

June 26, 1939

Just a few months before he died, TIME ran a cover story about Dr. Sigmund Freud, an "Intellectual Provocateur." As the decade of the 1930s drew to a close, TIME maga-

Time articles were becoming longer, but this piece on Freud is one of the longest we found. It is jammed with gems about Freud and his relationships with family and colleagues. Perhaps of most interest–certainly for 1939–is the account of what happened to Freud and his property with the Nazi takeover of Vienna.

Intellectual Provocateur. For 50 of his 83 years Sigmund Freud has insisted on talking seriously about subjects that other people did not want to discuss. When he began lecturing on the sexual basis of neuroses, in Vienna in 1896, his worldly colleagues regarded him with the embarrassed annoyance reserved for those who hammer away at something people would rather not talk about, even if talking would teach them something. But for laymen, as Freud's theories spread, he emerged as the greatest killjoy in the history of human thought, transforming man's jokes and gentle pleasures into dreary and mysterious repressions, discovering hatreds at the root of love, malice at the heart of tenderness, incest in filial affections, guilt in generosity and the repressed hatred of one's father as a normal human inheritance.

Last week, from his home in exile in London, this 83-year-old disturber of human complacency calmly turned his attention to another topic generally and understandably avoided. This time he psychoanalyzed anti-Semitism. What, he asked, are the reasons for a phenomenon of such intensity and lasting strength as popular hatred of the Jews? Economic and political reasons Freud leaves to others; in *Moses and Monotheism** he is concerned with hidden motives.

Most of the book is given over to an account of the infancy of the Jewish people–not as it is known historically, but as it emerges in their legends, beliefs and religious customs. Its purpose is not to relate a factually, but a psychologically accurate picture, thereby uncovering, Freud believes, the reasons for popular hatred of the Jews and the reasons for the Jewish attitudes toward the persecutions that have darkened their history.

Background. Only in view of the theory and practice of psychoanalysis is *Moses and Monotheism* intelligible. And the history of psychoanalysis is the history of Sigmund Freud.

When young Dr. Freud, fresh from five years' research on the nervous system, returned to his native Vienna and with high hopes hung out his shingle, the gay city was thronged with neurotics, "who hurried, with their troubles unsolved, from one physician to another." Some were afraid of animals; others constantly washed their hands, stammered, endured blinding headaches, lingering illnesses, or even developed strange paralyses of the arms and legs. All balanced precariously on the slender line between sanity and insanity. That the cause of their maladies was psychological, the 30-year-old psychiatrist was certain. But how these maladies arose, and how they could be cured—that was his great problem.

In his Paris clinic, Hypnotist Charcot had often commanded drowsy neurotics to shed their symptoms. But only a few obeyed the doctor's powerful will and woke up cured. Yet hypnotism was the only scientific light which could prick the deep caverns of the unconscious mind, and even if it brought no lasting cures, young Dr. Freud could not very well do without it.

His first great step toward the development of psychoanalysis came one day when his old friend, Dr. Josef Breuer, a brilliant, popular family doctor, told him the remarkable story of "Anna O."

Anna O. was an intelligent girl of 21, who, while nursing her father during a fatal illness, suddenly developed paralysis of her right arm and both legs. To Dr. Breuer's amazement, when he asked her questions under hypnosis, she explained to him the origin of her symptoms, one by one. While nursing her father, she had suppressed a swarm of impulses as frivolous, selfish or immoral. And each suppressed desire had somehow turned into a physical symptom.

One evening, for instance, as Anna was sitting by her father's bed, she heard dance music floating over from the house next door. She longed to join the party, but sternly repressed the wish. Afterward, whenever she heard the strong rhythm of dance music, she began to cough, almost as though she were beating time. Most astounding part of the case, said Dr. Breuer, was this: as soon as Anna understood the origin and nature of her symptoms, they disappeared.

Greatly excited, Freud joined Breuer, tried the new method of conversing with hypnotized neurotics. Their aim: to "purge" constipated minds of unhealthy, repressed ideas.

"Irresistible Attraction." Long after Breuer, discouraged by criticism, had left the partnership, Freud continued his attempts to find a more efficient method of mining buried thoughts. One day an alert patient, when asked if he could remember his recent experiences under hypnosis, repeated everything that had been said to him, everything that he himself had said.

This was a crucial discovery. Freud finally abandoned hypnosis, merely invited his patients to lie on a couch in his shaded office and talk of whatever entered their minds. This "free association," Freud soon discovered was not free at all. For his patients, at first reluctantly mumbling trivialities, gradually wandered back into the past, on to forgotten paths, stumbling painfully over hidden, moss-covered memories, dabbling in streams of old affection. Through sharp observation and almost poetic analysis, Freud was able to interpret the mass of material his patients dredged up, and explain the origin of their symptoms.

Why his patients were "suggestible," why they accepted his explanations, overcame their resistance, strove to know themselves and conquer their symptoms, was at that time a problem to Freud. One day, during her treatment, a woman patient suddenly threw her arms around his neck.

"The unexpected entrance of a servant relieved us from a painful discussion," wrote Freud. "I was modest enough not to attribute the event to my irresistible personal attraction." This emotional "transference," which appeared as passionate, sensual love or fierce hatred, arose in every analysis, accounted for the powerful influence of an analyst over patients. "[It is] the best instrument of the analytic treatment," Freud wrote, ". . . and it is resolved by convincing the patient that he is re-experiencing emotional relations which had their origin [in early childhood]." Thus Freud gained, in his patients' minds, the authority of a dearly loved (or violently hated) father or mother.

Storms of Childhood. After examining a large group of neurotics, Freud was surprised to discover that they all had one thing in common: a frustrated sex life. "The neuroses," he declared, "[are] without exception disturbances of the sexual function."

But it was not the unhappy marriages or love affairs of adult life that were mainly responsible for neuroses. For the same experiences that normal persons took in their stride were sufficient to bowl neurotics over. The foundations of neuroses, Freud discovered, were laid in the sex experiences of early childhood. Upon this astonishing fact, which Freud painstakingly confirmed in hundreds of cases, he built his famous theories of the *libido* (Latin for lust) and the Oedipus complex.**

Most powerful force which drives human beings, said Freud, is a primeval sex instinct, the libido. During childhood the libido is bound up with such experiences as eating, excreting and thumbsucking. In later years the libido may be transferred to another person (marriage), may remain grounded in childish sex play (perversion), or may overflow as artistic, literary, or musical creation (sublimation). In fact, said Freud, greatest source of creative work is the sex instinct.

Driven by libido, all children fall in love with their mothers,

hate and fear their fathers as rivals. Sometimes they may love their fathers too (ambivalence), but the fundamental hostility remains throughout childhood. (Later on girls often fall in love with their fathers.) This Oedipus complex sets the pattern for a child's response to other persons throughout the rest of his life. Normal persons outgrow the Oedipus situation by the time they reach maturity. But weaker characters cannot tear themselves away from their parents, hence, "fall into neuroses."

There is no escaping the Oedipus complex, said Freud, for it is our heritage from primitive ancestors, who killed their fathers in fits of jealous rage. "We are all omnibuses in which our ancestors ride, and every now and then one of them sticks his head out and embarrasses us," perceptively observed Oliver Wendell Holmes in his pre-Freudian novel *The Guardian Angel* (1867).

Friends & Enemies. In lighthearted pre-War Vienna, which boasted of its sexual freedom, Freud was jeered at and shunned. Prudish physicians complained that he made too much of sex, that he destroyed beautiful illusions (such as the innocence of childhood), that he invaded his patients' privacy.

NEWSPICTURES

Blake's "Burial of Moses"

Killed by the Jews?

After the War, when Victorian taboos were thrown aside, and cries of sex freedom rang in every parlor, Freud's doctrines were eagerly gobbled up. Such words as "repression" and "mother fixation" became a part of the common language. Many people still mistakenly think that Freudianism is a doctrine of licence. On the contrary, Freud believes that self-discipline is essential for civilized living, that there is a middle road between unhealthy repression, which bursts forth as neuroses, and free abandonment to sexual pleasures.

Among the most outstanding and faithful of Freud's U.S. pupils: Dr. Abraham Arden Brill, who translated Freud's works for U.S. readers; Dr. Fritz Wittels, Freud's biographer; Dr. Smith Ely Jelliffe, Dr. Hermann Nunberg, all of Manhattan; Dr. Isador Henry Coriat of the Boston Psychoanalytic Institute.

Because they do not believe in the primacy of the Oedipus complex, a small group of analysts have seceded from the Freudian union. Some of them do not agree that men are bound by primeval, rigid instincts. Others hold that society inflicts more wounds upon personality than the sex instinct. For these rebels, orthodox Freudians, whose feelings run high, have nothing but contempt.

Most famed among the secessionists are Carl Jung of Zürich, who has "retreated from psychoanalysis" into semi-religious therapy, and Alfred Adler,who died in Aberdeen two years ago. Adler held that man's mainspring is not sexual desire but a desire for superiority. Physical infirmity or family bullying produces an "inferiority complex." This complex, in turn, forces "overcompensation," or a transformation of weakness into strength. Because Demosthenes stuttered and Beethoven was deaf, said Adler, they developed inferiority complexes. Demosthenes compensated in magnificent oratory. Beethoven in magnificent music.

Exile. When the Nazis took Vienna last year they seized Freud's property, money and psychoanalytical publishing house. Although tortured by advanced cancer of the jaw, Freud at first refused to leave his home. In vain did his nephew, Manhattan Publicist Edward Bernays, plead with him to spend his last days in the U.S. He surrendered only when London's famed Dr. Ernest Jones flew to Vienna with a cargo of shrewd arguments.

Early last June Freud went to England "for peace," joined his son Architect Ernst. With him went another son, Lawyer Martin, and his gentle, brown-eyed daughter Anna, a practicing psychoanalyst. In a comfortable London house near Regent's Park, filled with his Greek and Egyptian treasures, Freud answers letters, continues his writing, even treats a few old patients. Every Sunday evening he settles down in the parlor, coddles his five young grandchildren, enjoys a lively card game called tarot with his sons. Always at his call is his nine-year-old chow dog, Lun. During his 16 years of suffering, throughout his 15 operations, he has never uttered a word of complaint. Patient and resigned, secure in his fame, he spins out his last thoughts, and basks in the sun.

Anti-Semitism. In the shadow of exile *Moses and Monotheism* was written. But no trace of lamentation shows in the tone of the book. We live, says Freud imperturbably, in remarkable times. For a long period it seemed that progress had made an alliance with barbarism, as in Russia, where a great attempt to lift the people to a higher standard of life was coupled with a ruthless suppression of free speech and thought. But in Germany this unnatural marriage has been dissolved, and barbarism proceeds alone.

In psychoanalytic procedure it is customary to counter the patient's own history of his case with the analyst's interpretation. Whether or not this psychoanalytic version is "truer," it sometimes succeeds in shattering the patient's preconceptions, in opening his mind to other alternatives of thought and action. Thus, in reviewing Jewish history, legends and attitudes, Freud very provocatively suggests: Moses, the founder of the Jewish religion, was no Jew, but an Egyptian.

Concrete evidence to support this belief is sparse; in fact, "to my critical faculties," says Freud, "it seems like a dancer balancing on one toe." Nevertheless, he proceeds, *if* Moses was an Egyptian, Jewish history becomes psychologically intelligible. If he was an Egyptian, he must have been an Egyptian monotheist. In the reign of Amenhotep IV, monotheism, the worship of one god, flourished briefly, when Amenhotep drove out the multitude of local deities in which Egypt abounded. After Amenhotep's

eath his religion was soon overthrown nd the older worship returned, but here & here disciples kept alive the monotheistic lea. If Moses was an Egyptian, argues reud, he must have been one of these; in he period of anarchy that followed Amenotep's death he must have converted the nslaved Jews, leading them out of Egypt, iving them laws, customs, social order. le must have been an irascible, hot-tempered, gifted, energetic and ambitious pper-class Egyptian administrator. For he purposes of Freud's argument, the ews must eventually have killed Moses. ut monotheism remained, its soaring regious abstractions, ideals of truth and ustice replacing the worship of idols, of raven images, of magic, of the spirits of he dead.

If the Jews killed Moses, his memory ust have persisted, like the image of the ather in childhood, as stern, implacable, ood. Yet, because of the crime of his murder, his memory is also associated ith feelings of guilt. That little plausible vidence indicates that Moses was killed oes not worry Freud–it is precisely what n individual or a people forgets, he beeves (and which can only be recovered to he conscious memory by psychoanalytic reatment), that reveals the source of their sychological dilemmas.

Hatred of the Jews, says Freud, is fundamentally hatred of monotheistic religion. The Germans, who now excel in the practice of anti-Semitism, were Christianized within historical times, often to the accompaniment of cruel repressions whose traces persist in their unconscious minds; their latent resentment toward Christianity is diverted against the upholders of another monotheistic religion. And meanwhile, the Jews themselves suffer from a guilt-obsession arising from the forgotten murder of Moses–an unconscious obsession from which they would presumably be freed by the admission of their guilt.

Moses and Monotheism is full of logical holes, doubtful history, fanciful anthropology. But in spite of the book's fine-spun hypotheses, Freud's psychoanalytic approach to the Semitic and anti-Semitic neuroses" still remains a bold attempt in pioneering a dark continent.

Mankind is not, Freud believes, so far removed from either barbarism or animals as it likes to think. But the mood of his last book is calm. If it does not answer all the questions that anti-Semitism raises, it shows that Freud is no more dismayed by this disorder than by the dark neuroses and perversions that he has studied all his life.

Knopf ($3).

*After the old Greek myth of Oedipus, son of the King of Thebes, who killed his father, married his mother.

Snippets

Short articles and excerpts from TIME's coverage of psychology through the 1930s

February 20, 1933

Some interesting data on when children are born and the effects of birth order are available in 1933.

Most babies are born in the night time, but most twins near noon, said Baron Otmar von Verscheur, Berlin anthropologist, last week after much research.

The youngest child in a family is usually the smartest, and the children of elderly parents are usually smarter than other neighborhood children, decided Dr. Richard Leos Jenkins, Chicago juvenile researcher after looking over records of 7,000 Sioux City, Iowa children. (Dr. Minnie L. Steckel gathered the records.) Havelock Ellis thinks that late generating parents do their offspring good. Dr. Jenkins, however, reasons that more money and experience in bringing up children enable such parents to take better care of latecomers.

July 3, 1933

In the 1930s, if husbands were unfaithful to their wives, or if wives were unfaithful to their husbands, they were doing so in spite of what could be dire consequences. At least such seems to be the conclusion from a brief report titled simply, "Man."

Dr. Mira [identified as a "psychologist" from Barcelona] had asked 578 married couples which of ten procedures they would follow if they found their spouses unfaithful. Most husbands (187) would try to surprise the lovers *in flagrante delicto*, then seek divorce. Most wives (185) would leave their philandering mates, but would not tell their friends why. Eleven wives would kill the husband, only five would kill his mistress. Twenty-one husbands would kill the wife, eight would kill her lover. Because Spaniards are hot-blooded traditionalists, 49 husbands elected a duel with the interloper. Surprisingly, 18 wives elected the same thing. Nevertheless, Dr. Mira concluded that moral problems are not similarly faced by persons of similar cultural background.

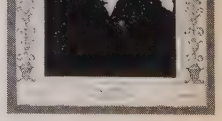
July 10, 1933

The following is from a rather lengthy article titled "Parents & Children," which reports on presentations made at the American Association for the Advancement of Science meeting held in Chicago. Much of the talk focused on the Oedipus complex as first introduced by Freud. Of most interest here is the writer's assessment of Freud's standing in the world of science as of mid-July, 1933.

Thirty-three years have passed since *Die Traumdeutung* was published. Today Sigmund Freud, ill and old (77), almost never emerges from the seclusion of his curio-filled Vienna home. His work has been honored, but it has also been severely criticized. Many a one-time disciple has drifted away, revising, overhauling, stripping the flesh from the impregnable skeleton of the original discovery and clothing it anew. One early disciple, Dr. Alfred Adler, discovered the Inferiority Complex, whose wide acceptance has nearly shouldered aside the Freudian interpretations, among them the Oedipus complex. Today the word "Freudian" is far less used by bigwigs of the psychological sciences than by literary and dramatic critics to pigeon-hole incestuous novels and plays.

Capone, 1930

But the Oedipus complex leaped from desuetude last week when the University of Wisconsin's Dr. Ross Stagner reported a survey which seemed factually to confirm its validity. Addressing the American Sociological Society in Chicago, Dr. Stagner said he had questioned a large group of boys & girls in their 'teens, found the girls *invariably* fonder of their fathers, the boys *invariably* fonder of their mothers. Dr. Stagner found that when children were reprimanded the Freudian "censor" (which ordinarily keeps the unconscious buried) was likely to be off guard, that boys then resented scoldings more from fathers than from mothers, that the converse was true of girls. The Oedipus complex, thought Dr. Stagner, was clearly entitled to a thorough-going reappraisal.



Hitler, 1931

July 24, 1933

Two weeks later, a letter to the editor from Dr. Stagner brought an apology from the editors.

Sirs:

I note with interest in your July 10 issue that I made a statement that children of a given sex *invariably* prefer the parent of the opposite sex, etc. etc. This is of particular interest because I made no such statement.

The statement I actually made in response to a question asked by the chairman of the meeting was that my data *seemed* to bear out the Freudian hypothesis, but that there were many exceptions.

ROSS STAGNER
University of Wisconsin
Madison, Wis.

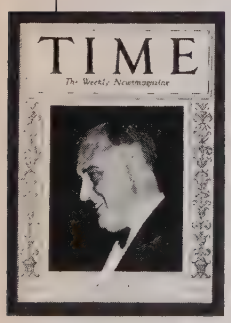
To Psychologist Stagner, apology.—ED.

March 5, 1934

Edward L. Thorndike and Irving Lorge, both of Columbia's Teachers College in New York, were two pioneer collaborators on many aspects of psychological testing and measurement. In 1934, their assessment of the tests then used for vocational guidance was not at all positive.

". . .Vocational guidance today is no better than guessing and considerably less honest . . ."

Such was the challenge flung last week in Cleveland at conferring members of the National Vocational Guidance Association. Challenger was Research Associate Irving Lorge of Columbia's Teachers College. His "proof" was a survey conducted in New York City under Columbia's famed Psychologist Edward Lee Thorndike.



Roosevelt, 1935

In 1921 Columbia researchers gave standard vocational-prediction tests of intelligence, clerical ability and mechanical adroitness to 2,500 schoolchildren, aged about 14. Careers of more than 2,000 were followed, their occupational success at ages 20 to 22 measured by: 1) earnings; 2) occupational level; 3) contentment with jobs.

"Correlation between the success predicted for the children by the original tests and the success which they actually attained," said Dr. Lorge, "hovered around zero." Concluded he: "Using the best tests and skills the counselor now has, his predictions at best will have 95% as much error as a guess."

Outraged counselors leaped to defend themselves. Cried Dr. Henry C. Link of Manhattan's Psychological Service Center: "Dr. Lorge's methods in arriving at his conclusions are comparable to making cheese pie without any cheese . . . . There was no professional assistance in guiding the boys and girls. If they had been given true vocational guidance the results would have been different."

"Vocational guidance is not fortune-telling," declared Dr. Harry Dexter Kitson, director of Columbia's Teachers College vocational guidance department.

April 9, 1934

It's difficult to know just how seriously to take the article titled "Crazy Teachers." Certainly many New York City teachers, and parents, took the issue involved very seriously.

New York City parents clutched their newspapers in wide-eyed alarm one day last week. They had often suspected that teachers as a class were a little queer. But here in big black headlines was the appalling assertion that no less than 1,500 of New York's public school teachers were actually unbalanced. Many were hopelessly insane, some almost maniacs.

Author of these charges was the city schools' Chief Medical Examiner, Dr. Emil Altman. He blamed political pressure, negligence, mistaken kindness and a Retirement Board which, rather than pay disability pensions, kept unbalanced teachers in service. Teachers who could not hold jobs elsewhere went to New York. Said Dr. Altman: "We have drained the country of crackpots."

Psychiatrist Abraham Arden Brill rallied to the teachers' defense with a statement that manic-depressives and other neurotics often made brilliant teachers. In the midst of the furor police picked up a high school substitute instructor in Brooklyn, charged her with attempting to strip in a subway station.

Day after his first charges Dr. Altman began to back down. He had not meant, he said, that the 1,500 were actually insane. And 1,500 was only an estimate. All he had was a list of some 700 teachers who had been referred to him during the past ten years.

July 2, 1934

The following was provided, perhaps in jest, as a psychological word-to-the-wise concerning the suitability of college women as wives. How times have changed, indeed.

". . .A college woman when she becomes a wife makes more trouble than all the other classes of wives put together. I make just one exception. The only wife who makes more trouble than a college woman is a wife who has gone to a girls' school. A college woman is too ambitious, too full of ideals for any man to get along with. The girls' school wives suffer from the spinsterial environment in which they live during impressionable years. Don't make the mistake of treating your wife like a pal. Treat her like a woman." Such advice was given the Western Psychological Association at Berkeley, Calif. by a member of the Los Angeles Institute of Family Relations.

May 27, 1935

The American Psychiatric Association met in Washington in 1935, and the meeting was covered by TIME. Of particular interest (from this two-column article) are the opening and closing paragraphs.

Already half the hospital patients of the nation are in insane asylums or their equivalents. Psychiatrists are convinced that within a few years one out of twenty of the inhabitants of the U.S. will be mentally incompetent or emotionally unstable.

7 Points of Happiness. So long as a person:

1) Is satisfied with his own looks, no matter what others may think;

2) Does not worry about being weak or sickly;

3) Takes charge of situations where he can, and willingly follows the leader where he must;

4) Is manly (or womanly);

5) Charms the opposite sex as much as he desires;

6) Asks no more of the future than he can reasonably expect to earn from that future;

7) Has a private philosophy about death and future life.

So long as a person can remain contented about these points, reasoned Dr. Paul Schilder of Manhattan, that person will not go crazy.

September 23, 1935

In an article titled, simply, "Testosterone," it is announced–in a somewhat shrill tone–that testosterone has

been discovered to be *the* male sex hormone, and that it can now be artificially produced from sheep's wool. What is remarkable about this short item is the last sentence of the final paragraph.

To produce one ounce of natural testosterone would require the castration of some 1,000,000 sturdy men. German and Swiss chemical laboratories are already prepared, said Dr. Ruzicka last week, to manufacture from sheep's wool all the testosterone the world needs to cure homosexuals, revitalize old men.

October 28, 1935

Perhaps we can call this item "Hope Springs Eternal," or perhaps we should be more generous and call it, "Right Idea; Wrong Time Frame." The speaker is Dr. Charles H. Mayo. (Remember that in the 1930s it was very common to refer to schizophrenia as "dementia praecox.")

Said he: "Within five years I think we will be able to restore feeble-minded and insane patients to full use of their faculties. Dr. Alfred W. Adson of the University of Minnesota has had miraculous results from the use of an experimental drug. I have seen dementia praecox patients who have been confined to asylums for more than seven years treated with the drug. They have gained complete return of their mental powers for a short time.

"The effect of the drug disappears within three weeks. But I feel certain we are on the road to discovery which will make the cure permanent."

November 11, 1935

There are classroom demonstrations; then again, there are classroom demonstrations. The following is the complete item as it appeared in 1935, under the title "Subject."

In a class in abnormal psychology in Atlanta, Ga.'s Emory University, Professor W. G. Workman, trying vainly to hypnotize a student for demonstration purposes by monotonous talk and having him stare at a chalk line, suddenly noticed that a watching member of the class had gone into rigid trance. It was Charles Hudson, lonely, nervous junior, a star pupil in abnormal psychology. Professor Workman could not bring Charles Hudson out of the trance, prescribed exercise and normal activity. For three days fellow-students walked the blank-eyed boy around the campus, rode him on street cars, took him to a cinema. Suddenly, on the third day, Charles Hudson blinked, asked what had happened.

March 9, 1936

The obituary of Ivan Pavlov; an occasion for political comment:

Ivan Petrovich Pavlov, 86, world-renowned Russian physiologist who won the Nobel Prize for medicine in 1904 and went on to lay the cornerstones for modern behavioristic psychology; of influenza; in Moscow. Since his efforts to weld mind & body into one delighted Russian Communists, they babied him, dutifully reported his characterization of them as "half-illiterate, rough handlers of science," gave him a beautiful laboratory, a $10,000 annuity, paraded him as often as possible to convince the world of their devotion to Science.

May 4, 1936

Sleep research is not of recent origin. Here is the complete report from a TIME article in 1936–long before the discovery of REM and NREM sleep patterns.

For Science's sake one afternoon last fortnight four students at University of Southern California started to stay awake as long as possible. Psychologist Brant Clark and his co-worker, Dr. Neil Warren, wanted to clarify the physiological effects of a long period without sleep. After a day or two, attendants had such a hard time keeping one subject awake that they let him go. The other three started to play "Monopoly." They were so irascible that the psychologists deemed it best to terminate the game. After the young men had stayed awake 54½ hours they gave up, plunged into bed.

In India two months ago, a merchant named Rai Bahadur Ramjidas Bajoria, believing that he had not slept for two years, offered $10,000 to anyone who would restore his ability to sleep normally (TIME, March 9). In Hungary there is a woman of 80 who says she has been continously awake since 1911. Such people are either lying or they do not realize that they doze off while "resting." The chief physiological result of going without sleep is exhaustion, and utter exhaustion causes death. Dogs have been kept awake until they died. The best authentic record is that of a man who went 231 hours –about 9½ days–with almost no sleep. Loss of sleep can produce complete insensibility to noise and a high degree of anesthesia to pain.

Pending tabulation of the results of his test, Dr. Clark described some of the effects which 54½ sleepless hours had on his students: "The faculty which suffers most. . .is vision. The boys just couldn't see clearly, their notions of perspective were bad, their eye movements slow and their judgment of color erratic. Muscular coordination was low, tests of writing, aiming a gun and hitting a nail on the head showing a great loss of accuracy. But there were periods when the boys seemed to make brief comebacks to alertness, something like 'second wind.' "

Dietrich, 1936

May 25, 1936

By the mid-1930s Freudian psychoanalysis was beginning to lose its firm grip on psychiatry as new approaches to psychological disorders emerged. Although A.A. Brill was there to speak for the defense, the overall tone of the article, "Damage and Defense" was very negative. It begins as follows:

To denounce psychoanalysis a fortnight ago when its creator Dr. Sigmund Freud was celebrating his 80th birthday would have seemed an ungracious act. Last week bars were down and psychiatrists, notorious among doctors for insistent talkativeness, gave tongue. Loudest sound fury broke in Manhattan, at a meeting of the New York Neurological Society.

Glaring at Dr. Abraham Arden Brill, 61, who translated Dr. Freud's books into English and introduced psychoanalysis to the U.S., Internist Harold Thomas Hyman, 41, began by denouncing the $10 an hour fee which psychoanalysts ordinarily charge for their services. Most patients, Dr. Hyman estimated, require 375 talking treatments before they end their course. Cried he:

"Their justification of these prices is sheer rationalization. They say that the

Gable, 1936

patient must make a real financial sacrifice before the treatment does him any good, and also that economic insecurity keeps the analyst from doing his best work. This seems to me an attitude which in itself borders on the neurotic."

June 7, 1937

The obituary of Alfred Adler:

Dr. Alfred Adler, 67, Viennese psychologist, founder of the school of "individual psychology," originator of the phrase "inferiority complex," longtime professional enemy of Dr. Sigmund Freud, his old teacher; after collapsing in the street; in Aberdeen, Scotland.

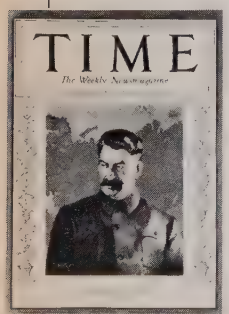
April 10, 1939

The obituary of Sigmund Freud:

Dr. Sigmund Freud, 83, exiled Austrian, father of psychoanalysis; of cancer and heart disease; in his son's home in Hampstead, England. Throughout his last 16 years he suffered pain from cancer of the jaw, saw his books burned by Nazis, his ideas distorted by exaggeration, overpopularity, licentious application. Never lamenting his persecution and illness, he waited for his death patiently, his only complaint: "It is tragic when a man outlives his body."

October 30, 1939

Hitler's rise to power in Europe was getting everyone's attention as the decade of the 1930s drew to a close. The state of Hitler's mental health is still a matter of some debate. This item was titled, "Again, Hitler."



Stalin, 1937

Since last year, no fewer than 13 prominent psychiatrists have publically diagnosed Adolf Hitler (at long distance) as a paranoiac, have prophesied the Führer's mental collapse . . . Although Hitler is now on the borderline, concluded Dr. Brown [Director of Oxford's Institute of Experimental Psychology], may stave off insanity for many a long speech, defeats in the field and the consequent necessity for making "terrible decisions" may push him over the edge into stark, staring madness, or even suicide.

November 20, 1939

A lengthy article on shock treatment describes in lurid detail the reactions of patients undergoing Metrazol Shock and Insulin Shock–the only two means of creating a favorable outcome through shock in 1939. Apparently these techniques were reserved only for those suffering from schizophrenia.

Technique of metrazol injections is simple. A patient receives no food for four or five hours. Then about five cubic centimeters of the drug are injected into his veins. In about half-a-minute he coughs, casts terrified glances around the room, twitches violently, utters a hoarse wail, freezes into rigidity with his mouth wide open, arms and legs stiff as boards. Then he goes into convulsions. In one or two minutes the convulsion is over, and he gradually passes into coma, which lasts about an hour. After a series of shocks, his mind may be swept clean of delusions.

So horrible are the artificial epileptic fits forced by metrazol that practically no patients ever willingly submit . . . During their violent convulsions, patients arch their backs with such force that sometimes they literally crush their vertebrae.

How "convulsant therapy" works, nobody knows. A score of theories have been offered, both physiological and strictly psychological. Boldest: 1) certain poisons invade brain cells, cause schizophrenia, and shock treatment helps the body to combat these poisons; 2) the terrible fear of death caused by shock treatment inspires despairing schizophrenics to turn back to life.

December 18, 1939

Students of psychology are familiar with the name Buros through their exposure to the Buros' *Mental Measurements Yearbook*, which describes and evaluates published psychological tests. The 1938 version was strongly critical of a number of tests.

A leading fad in U.S. schools and colleges today are the so-called "standardized" tests. There are more than 4,000 of them. They purport to measure an individual's intelligence, knowledge, character, personality, radicalism, musical tastes, artistic ability, tea-table form, inhibitions, morale. Last week one Oscar Krisen Buros, an associate professor of education at Rutgers University, emerged from a voyage of exploration in this jungle of tests. Harrowing was his tale.

Professor Buros had suspected that nine out of ten tests were unreliable. To check his suspicions, he got 133 top-rank experts to rate the tests, Rutgers to publish their ratings (*The 1938 Mental Measurements Yearbook*–Rutgers University Press: $3). To some tests, notably Louis Thurstone's famed intelligence test for college freshmen (American Council on Education Psychological Examination), the experts gave a clean bill of health, high ratings. Elsewhere they turned up many a prize absurdity. Samples:

■ (From a personality test) *Q.*: "Do you think that this school is run as if it were a prison?" Reviewer's comment: "It is questionable whether high-school students would have the courage and the desire to answer such questions honestly."

■ *Q.*: "With what person do you spend the most time?" Correct answer: "With mother." Comment: This answer might mean one thing when given by a nine-year-old, quite another from a 16-year-old.

■ From a test to rate an individual's attitude toward any institution) *Q.*: "This institution 1) is the most beloved of institutions, 2) is necessary to the very existence of civilization, 3) gives real help in meeting moral problems, 4) will destroy civilization if it is not radically changed, 5) has done more for society than any other institution." Comment: Try rating the Interstate Commerce Commission on that scale.

Professor Buros' harrowing adventures began even before he had got his book to press. Most tests are marketed by commercial publishers, yield handsome profits to publishers and authors. When they had seen pre-publication copies of his book, some publishers began to appeal to Mr. Buros "in the name of common decency" to stop the presses. A distraught publisher: "Now, Oscar! Is this sporting? . . .During my four years of service in the United States Marine Corps and later during my service . . . with the A.E.F., it never occurred to me that I would ever be called upon to die for dear old Rutgers."

By last week some test publishers had broken off diplomatic relations with Professor Buros. Nevertheless, the professor was almost ready to publish a second yearbook. This time, instead of 133 experts he had 245, among them such famed testers and educators as University of London's Charles Spearman, Yale's Edward S. Noyes, Iowa's Carl Seashore, Harvard's Charles Swain Thomas, University of Chicago's Ralph W. Tyler.

The 1940s

Psychology goes to war; study of mentally gifted; psychosurgery provides hope; hayfever and intelligence

In this pivotal decade millions were slaughtered, the first atoms split, loyalties traded and world powers named. Hitler laid waste to great pieces of Western Europe while America, still deep in the Great Depression, clung with futility to a neutral stance. Then, on a "day that will live in infamy" U.S. soldiers let out a rallying cry at Pearl Harbor, and the nation went to war. On the home front, housewives coped with rations and Rosie the Riveter kept products coming as Garbo made her last, *Oklahoma!* opened, and Bing Crosby vied with soap operas for the country's radio time. Chicago saw the Manhattan Project. Normandy saw D-Day. Hiroshima saw the end of a war and the inception of the Atomic Age. As soon as the new world powers emerged, the Cold War tensions began to build, yet Truman made postwar Europe priority one with a $17 billion Marshall Plan. Then finally, after an era of bloodshed and bitter contention, America welcomed the simple pleasures of bikinis and Brando, Babe Ruth and ranch homes, television and UFOs in a previous moment of relative calm before the coming Cold War storms.

EUGENE MIHAESCO

April 29, 1940

TIME magazine seemed to keep careful watch on Dr. Arnold Gesell and his writings. Gesell's wisdom concerning child development was often quoted at length. The following article was prompted by the publication of Gesell's twentieth book, *The First Five Years of Life* (which, you will note, sold for $3.50 per hardbound copy).

The more Arnold Gesell studies children, the more complicated he finds them. Probably the world's best-informed expert on child behavior, he has examined thousands, with cameras and his solemn eye, in his clinic of Child Development, which he founded at Yale in 1911. It has taken him 19 books to publish his findings. Last week Dr. Gesell turned out his 20th, *The First Five Years of Life* (Harper; $3.50).

Dr. Gesell believes that children are not only charming but startling, is firmly convinced that it is silly to try to measure them by intelligence tests. He has worked out an elaborate method of spying on them from behind a one-way-vision screen. In *The First Five Years of Life* he describes: 1) how a normal child grows; 2) how one normal child differs from another. Normal behavior at different ages:

Baby Talk. At 16 weeks a baby bubbles, coos, chuckles; at 28 weeks he crows; at 40 weeks he understands No! No!; at one year he speaks two or three words; at 18 months he speaks ten words and begins to drop baby talk; at two years he knows 300 words; at three he speaks sentences, soliloquizes; at four he asks endless, apparently frivolous questions, makes intentional puns (*e.g.*, "Cedar rabbits" for Cedar Rapids); at five talks succinctly and to the point, asks questions because he really wants to know.

Action. At 16 weeks he graduates, with a plunge, from his bassinet; at 28 weeks he sits alone, grabs things; at 40 weeks he can pick up a crumb with his fingers; at a year he creeps, hauls himself to his feet; at 15 months he stands alone, builds a tower of two blocks; at two he runs, kicks a ball,

builds a tower of six blocks, holds a glass with one hand, hunts for missing toys, turns pages one at a time. At three he likes to solve ball & box puzzles, builds a ten-cube tower, turns sharp corners while running, pedals a tricycle; at four he can broad-jump, throw a ball overhand, draw a man, button his clothes; at five he skips, stands on one foot, dances to music, carries a tune, washes his face, likes to wash dishes.

Me and Thee. At 16 weeks he recognizes his mother's face; at 40 weeks he likes to have people around ("even when he waves bye-bye he may prefer to have them remain"); at one he repeats performances that get a laugh; at 18 months he strikes the air rather than an intruder ("when he becomes socially more mature he will slap the person"); at two he distinguishes between "mine" and "yours," pouts, dawdles; at three he "negotiates reciprocal trade agreements," obediently runs errands; at four he is bossy, tells little lies, "likes to go to the bathroom when others are there to satisfy new curiosities"; at five he is less quarrelsome, chatters at meals, helps baby sister, tells his name and address when he is lost, even plays checkers with policemen who find him.

When rangy, kindly Dr. Gesell began his observations in 1911, child behavior was, scientifically speaking, largely a subject for clucks and coos. Dr. Gesell charted away like a Columbus, let others name his landfalls. Today many a modern theory about child upbringing (notably child feeding) is based on his findings. Dr. Gesell's own conclusions:

- The first five years of life are the most important in an individual's education.
- Early childhood upbringing ("developmental supervision") is largely a medical problem.
- Fully as important as child training is parent training. Parents need "a working philosophy of growth which will give perspective to the everyday problems of childhood."
- Because all children need wise supervision at an early age, and because nursery schools are finite, public schools should "make periodic contacts" (*i.e.*, part-time instruction) with two- three- and four-year-olds.
- Children should not be forced to read at six if they are not ready.
- Something should be done about "innumerable households" that still scold, threaten, shout at, slap, beat their children.
- A child is not a miniature adult but a growing being who changes radically as he grows.

July 15, 1940

Almost all psychology students are (or become) familiar with Sheldon's theory of personality (temperament) based on body type, or physique. Almost all of Sheldon's research–and his conclusions–has been discredited, but the appeal of his logic still sounds attractive.

Judging Mind by Body. From time immemorial men have had the idea that people of different body shapes have different temperaments. Despite exceptions, fat people seem in general to be jolly, gregarious, lazy, comfort-loving; thin, wiry or bony people are often secretive, seclusive, introverted;* powerful giants are supposed to be self-assured, mild-mannered and soft-spoken. Making the maximum possible allowance for environmental conditioning, most biologists insist that there must be some relation left between behavior and physical constitution.

What are the relations between body structure and glands? Between body structure and temperament, insanity, criminal tendencies, immunity and susceptibility to disease, nutritional requirements, sex needs, rate of maturing, length of life? Few years ago a smart, quiet, pleasant young man named William Herbert

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Endomorphic (top), Mesomorphic (ctr.), Ectomorphic (bot.)
Only 1% look like them.

Sheldon began to think hard about these clouded questions.

A Rhode Islander who had spent some time cow-punching in the West, William Sheldon took his Ph.D. in psychology at the University of Chicago. When he became interested in constitutional psychology, he saw that he ought to know a good deal about anatomy and physiology, so he spent three more years getting a medical degree, another year as a hospital intern. From Chicago, from Harvard, where he transferred four years ago, and a few other universities, he collected some 4,000 photographs of freshmen, taken in the nude from the front, side and rear under

controlled and uniform conditions so they could be precisely measured and compared. He added some clinically obtained data on women and older men for the sake of perspective.

Dr. Sheldon became convinced of two things:

1) That much brilliant research on glands had been wasted. Since glands are only part of the whole body, Sheldon deemed it more profitable to start with the whole. "Glands," he said, "probably determine personality only in the same sense that the long bones and the short ones, and the gut and the muscles and the skin, and the rest . . . of the body determine personality."

2) That previous attempts, including those of famed Ernst Kretschmer of Germany, to sort human physiques had bogged down in a welter of mixed types, sub-types, hybrid types, etc. because individuals would not fit preconceived categories. Sheldon attacked the pigeonholing problem from another angle: that if three structural components or characteristics (of his own devising) body measurements would enable an investigator to determine, for any person, the strength of each component. That strength could be rated numerically on a scale of 1 (almost complete absence) to 7 (almost complete dominance). Then the individual's body type would be a three-digit number showing his quantity of each component–such as 443, 172, 236. There would be no individual who would not "fit."

Dr. Sheldon does not claim that mere body-typing solves the relation of physique to all aspects of temperament. But he does claim that efficient and "meaningful" body-typing lays the groundwork for solving such problems.

Components & Types. In *The Varieties of Human Physique* (Harper; $4.50), a summary of his work which he published last week, Dr. Sheldon describes and defines his three components. They are called *endomorphic*, *mesomorphic* and *ectomorphic* because the prominent features of each are derived, respectively, from the embryo's endoderm or inner layer (abdominal organs), the mesoderm or middle layer (bones, muscles, connective tissue, heart, blood vessels), and the ectoderm or outer layer (skin, hair, nails, sense organs, nervous system, brain).

The endomorphic component involves roundness and softness of body, central concentration of mass, short neck, small bones, weak, short, tapering limbs, small hands and feet.

The mesomorphic component involves squareness and hardness of body, rugged, conspicuous muscles, large, prominent bones, heavy chest, wrists and hands, broad shoulders, broad hips, powerful pelvis.

The ectomorphic component involves fragility and delicacy of body, spindly bones, stringy muscles, dropped shoulders, prominent ribs, long, thin, forward-bent neck, small face, sharp nose, thin, dry, sensitive skin, fine, quick-growing hair, prominent genitalia.

Endomorphy gets the first digit in the type number, mesomorphy the second, ectomorphy the third. The extreme endomorph is a 711, the extreme mesomorph a 171, the extreme ectomorph a 117 (see cuts, p. 26).

But these extremes account for only a little over 1% of the sample studied. Much more common are two types in which the three components are well balanced, the 443s and 444s. Such people are sleek, says Author Sheldon. "They groom well, they are relaxed, they are well filled out all over, their hair combs easily and lies smoothly, they have rosy color and good complexion . . . easy carriage . . . smooth walk . . . soft pleasing skin."

Other types of interest:

"The 236 is a slender, upright physique, usually tall and [sometimes] has a symmetry and beauty of proportion that is aesthetically of the highest order." Dr. Sheldon found that many famous paintings of Jesus Christ represented Him as a 236 or a 235.

"The 172 is probably the masculine ideal which . . . carries supreme strength and masculine ruggedness . . ." Those heroes of the comic strips, Tarzan, Superman and Li'l Abner, are 172s.

Utility. Dr. Sheldon declares that though people may put on or lose weight as they grow older, their basic physique types do not change. Thus weight tables which give "normal weights" against height and age, without regard to structural type, mean less than nothing. Example: A heavy woman of type 632 frets because she thinks she is 30 lbs. overweight, whereas she is actually 30 lbs. underweight for her type and ought to stop dieting at once.

Future investigation may show that different physical types have different nutritional requirements. It is commonplace that fat endomorphic people usually like sweet and starch foods–carbohydrates. Sheldon thinks it may turn out that a high carbohydrate diet is just what such people need.

A woman of type 442 is one of nature's practical jokes. In youth she is generally an active, slender pep girl with the endomorphic 4 concealed. After maturity that component blossoms out and she gets chubby. Sometimes a girl of this type, in her streamlined adolescence, chooses a career as a dancer. It might save years of wasted effort if she could be dissuaded by constitutional diagnosis and prediction of her future dimensions.

Temperament. As in physique, Sheldon also finds three components of temperament: *viscerotonic*, *somatotonic*, *cerebrotonic*. The extreme viscerotonic "radiates comfort. He participates easily in social gatherings and makes people feel at home. . . His joys and sorrows he communicates to others."

The extreme somatotonic is "an active, energetic person . . . addicted to exercise and relatively immune to fatigue. He walks assertively, talks noisily, behaves aggressively . . . " In youth he looks older than he is. "He is concerned mostly with affairs of the moment and meets his problems with some form of activity."

The extreme cerebrotonic is introverted, inhibited, unable to "let go" easily. He is likely to have allergies, skin trouble, chronic fatigue, insomnia. "He is sensitive to noise and distractions. He is not at home in social gatherings and he shrinks from crowds. He meets his troubles by seeking solitude."

These three components are mixed in various proportions in different people, and they seem to correlate, roughly but by no means exactly, with the endomorphic, mesomorphic and ectomorphic physical components, in that order. The nature and degree of the correspondence, and its interplay with environmental factors, says Sheldon, are questions for the future.

It seems likely that the amount of any one physical component, singly considered, is far less important to temperament than are balances and ratios among all three. For example, the body types 514 and 541 both have the same amount of endomorphic roundness, but the other two components, the strong and the frail, are reversed. So the 514 is a "long-legged, round-shouldered, completely soft and effeminate boy," whereas the 541 is a "ruddy, powerful, active, barrel-bodied boy who is usually full of bounding energy and is likely to become president of something."

* Caesar distrusted Cassius because he had a "lean and hungry look."

October 14, 1940

Lewis Terman's studies of the mentally gifted are followed quite regularly. This interim report comes a full 20 years after the research was first published.

Terman's Kids. For decades the problems of human personality have puckered the benign and seamy face of Lewis Madison Terman. Dr. Terman, professor of psychology at Stanford University, has spent much time studying the personality factors that make for happy or unhappy marriages (TIME, June 24, 1935;

Oct. 17, 1938). Another of his great interests is child prodigies. In SCIENCE last week Dr. Terman reported what happens to child prodigies when they grow up, get jobs, get married.

Before 1850, a gifted child was regarded with "a mixture of admiration, awe and hopeful expectation." But in the latter 19th century the idea spread that the "precocious" child was somehow abnormal, probably headed for failure, neuroticism or insanity. If a child was phenomenally good at one thing it was assumed that he lacked other faculties. Heavy-duty thinkers wrote treatises to prove that a child's mental ability should develop at the orthodox rate if he was to have a well-rounded maturity. These nonsensical ideas, says Dr. Terman, have abated somewhat but have by no means vanished.

In 1922 Terman picked out, on the basis of IQ tests, some 1,300 gifted youngsters from about a quarter of a million California school children. Thus each child selected was the pick of about one in 190. Dr. Terman's requirement was an IQ of 140 or more (average for the chosen children was around 150). Dr. Terman was not interested in objections to the IQ as a measure of real intelligence–whether the IQ is an accurate measure or not, it gave him something to go on.

The group included more than 1,000 grade-school pupils, averaging nine or ten years, and more than 250 high-school students, with a median age of 15. Jews ranked easily best, followed by children of old U.S. stock originally from New England or the Middle West.

Immediately the investigator blew up three fallacies: 1) that smart children tend to be frail; 2) that girls are smarter than boys; 3) that smart children are "one-sided." Medical and anthropometric tests showed that Terman's group was healthier, and, in general, physiologically superior to the average. In the grade-school section the ratio of bright boys to bright girls was 6-to-5, in the high-school section 2-to-1. As a group the bright kids showed versatility in information and school activity.

The boys & girls grew older, now range from 22 to 37, with the average over 30. "Terman's Kids" are famed, among psychologists, the world over: for Terman and his field workers have kept tabs on them, issued progress reports from time to time.

Average earned income of the men at age 30 is around $3,000. This is good for an average, and it would be even higher if many of the men were not teachers in universities just getting their careers under way. About a dozen men make $10,000 to $15,000. One of these is a staff artist for Cinemanimator Walt Disney–salary, $12,000. The group includes a physical scientist and a physiologist who are university department heads; a 32-year-old aeronautical engineer who is coordinator of research in a $10,000,000 laboratory; also jazz-band players, ghost writers, radio announcers, a fox farmer, a rare-stamp dealer, a cop. Half of Terman's boys entered professions, with the law leading. They have written dozens of books, hundreds of short stories, poems, articles. They have taken out more than 80 patents.

Depression hit the group hard, but all, at latest report, had managed to stay off relief. About two-thirds married, and the divorce rate is less than the general. The mortality rate is also less than the general, the suicide rate slightly less, the percentage of confinement in mental hospitals also less.

The conclusion, as plain as the wrinkles on Dr. Terman's face: children with high IQs get along better than average in later life.

July 21, 1941

Psychodrama as a therapeutic technique is described by its originator, Dr. Jacob L. Moreno. We learn of a connection between Moreno and Actor Peter Lorre; and we learn that psychodrama can be useful in determining vocational aptitudes.

"Merely Players." "Last week we had Hitler here. We sent him up on the balcony with the gods, gave him a Göring, a Goebbels, and tried to make him happy. We also had Hamlet. As soon as he came we supplied him with a ghost. We gave him a mother too, but when he went on the stage, he killed her."

That is the way Dr. Jacob L. Moreno describes the life at his Psychodramatic Institute in Beacon, N.Y. Psychodrama is Dr. Moreno's method for treating mental ills–a sort of theatrical psychoanalysis which he uses for troubled mortals, as well as for Hitlers and Hamlets. Instead of lying on a couch and confiding their woes to a psychoanalyst, patients act out their problems, impromptu, on a bare little stage. Many a patient who is hostile or shy refuses at first to take part, suddenly blurts out his hidden neurosis.

Spontaneous Combustion. In the Institute, a rambling white house and little theater on the green slopes of the Hudson Valley, live about 20 patients of all ages, with all forms of mental illness. The patients work around the estate, gardening, running the theater. The theater, made of pungent, unpainted wood, with seats for some 80 people, has a circular stage on three levels, with a balcony overhead for patients with delusions of grandeur. There are no curtains or scenery, only two pillars in the background, a bare table and chairs. Floodlights of three different intensities play on the stage, corresponding to the patient's mood: soft white, red for excitement, dim blue for soliloquies.

Several afternoons a week, a carefully selected group of patients meets in the theater. Dr. Moreno picks one protagonist, who has been prepared by long, intimate conferences, and they sit together on the steps of the stage planning a rough outline of the scene they will reenact. Other actors in the drama are also picked by the doctor–usually they are patients too, but sometimes a part is taken by a specially trained professional actress. The patient may act himself, his mother, his wife, or any role he chooses. The actors all move freely about the stage, sometimes merely chatting, sometimes bursting out with hidden longings, or even "killing each other." Somehow acting integrates broken fragments of a split personality. A patient who is obsessed by death, for example, may forget his terrors when he acts the part of a grocer or salesman. The little dramas unfold as spontaneously as children playing.

Dr. Moreno has helped many a frustrated married couple, has even tackled "triangles" with all the participants on the stage at once. In one smash-hit he brought a wife and her Don Juan husband to the theater, collected as audience and cast 75 persons who were all involved in one way or another. In marital storms, claims the doctor, psychodrama brings far better results than psychoanalysis, for he can deal with both partners at the same time, in dynamic situations.

Starring John Doe. "Psychodrama is not acting," says Dr. Moreno, "it is a new world. The patients are in a miniature society where life is simplified. They adjust themselves on the stage to real situations. They are in constant movement, planning, directing, guiding their lives, working together. If they can adjust themselves on the stage, they can learn to do it outside. Orthodox psychoanalysis only makes a patient feel more self-conscious and lonely. Away with the isolationism of the analyst's couch!"

Dr. Moreno started his "spontaneous drama" in Vienna in 1921, where he directed a group of healthy children at play. Among his child protégés were Actors Peter Lorre and Elisabeth Bergner. His technique is studied in many U.S. schools (Hunter College, Bennington College, Duke University). Manhattan's Bellevue Hospital has a therapeutic theater and one was recently started in huge St. Elizabeth's Hospital in Washington, D.C.

sychodrama is equally useful, says the doctor, in determining ocational aptitudes–people are asked to act out certain job situ- ions before a trained observer, tested for their reaction to em- arrassing predicaments.

ovember 30, 1942

sychosurgery–frontal lobotomies in particular–has been eferred to before in TIME articles, generally in a very avorable manner. The following, however, is the most omplete account of the procedure and its history.

sychosurgery. The surgeon's knife can reach into the brain to sever the tensions which underlie a psychopathic personal- y. This drastic method of rescuing psychotic patients from com- lete insanity is not exactly a new invention. It has been devel- ped in Lisbon by Dr. Egas Moniz since 1935. But now two men ho have pioneered this treatment in the U.S.–Neurologist Wal- r Freeman and Neurosurgeon James W. Watts of George Wash- ngton University–have published a book, *Psychosurgery* (Char- s C. Thomas; $6) based on their work. Some 300 people in the .S. have had their psychoses surgically removed, Dr. Freeman evealed last week, and a score of U.S. surgeons are now using the evolutionary new technique.

The Brain Is Sliced. In their development of Dr. Moniz' ethods, Drs. Freeman and Watts drill a small hole in the temple n each side of the patient's head where two skull bones meet. urgeon Watts then inserts a dull knife into the brain, makes a an-shaped incision upward through the prefrontal lobe, then ownward a few minutes later. He then repeats the incisions on ne other side of the brain. No brain tissues are removed. (In two perations they have cut cerebral arteries. Both patients died.)

The patient is given only a local anesthetic at the temples–the rain itself is insensitive–and the doctors encourage him to talk, ing or recite poems and prayers while the operation is in prog- ess. As his lobes are sliced, he becomes drowsier, more confused nd incoherent. When his replies to questions show that his mind s thoroughly disoriented, the doctors know they have cut deep nough into his brain. (Dr. Freeman once casually asked a patient, What's going through your mind now?" Said the patient: "A nife.")

Cutting Connections. Purpose of the operation is to sever nost of the nerve connections between the prefrontal lobes and he thalamus. The thalamus is lower, nearer the spinal cord. This art of the brain is widely believed to be the seat of emotions–fear, age, lust, sorrow, other purely animal instincts. All animals have thalamus, but the higher animals–above all, man–developed uperimposed layers of brain tissue which exercise some control ver the thalamus.

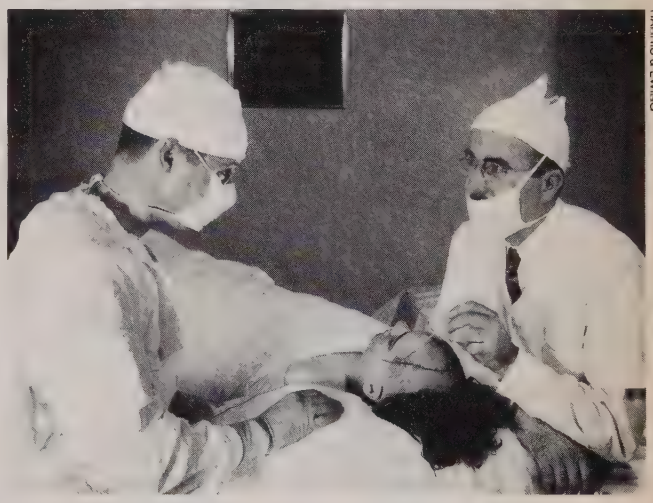
In man's prefrontal cortex is the seat of mental power which estrains the thalamus–foresight, self-consciousness, social ad- ustment, imagination, etc. The reasoning, self-consciousness ortex is integrated via thousands of millions of nerve cells with he emotional thalamus, so that a normal mind is a more or less armonious mixture of intellect and emotion. But sometimes this ntegration takes on a fixed, unhealthy pattern: foresight becomes nxiety, anxiety becomes fear, and the psychotic victim may head or lunacy unless treated by psychoanalysis shock therapy (e.g., with electricity or insulin) or–as a last resort–psychosurgery.

The surgeon's incisions radically disrupt the connection be- ween the prefrontal lobes and the thalamus. Not all the connec- ions are severed, since a patient might then become a victim of is unrestrained thalamus. But old ideational patterns are de- troyed. The brain is forced to reintegrate itself to form new inter- al pathways.

New Personalities. After psychosurgery a patient requires months, sometimes a year or more, before he is mentally reintegrated and can lead a useful life. His personality is changed: he is neither his psychopathic nor his pre-psychopathic self.

His capacity to project himself into the future is reduced. He is less self-critical, more extroverted. Say Drs. Freeman and Watts of their patients: "The freedom from painful self-consciousness, and also from preoccupation with former conflicts, repressions, frustrations and the like, and the associated elevation in mood, renders life particularly agreeable to them and they enjoy it to the fullest."

After recovery a patient's emotional responses are vivid but somewhat superficial. He is indifferent to social amenities, may speak his mind and joke so tactlessly that he embarrasses his family and friends. Yet he will apologize for his behavior with real sincerity. His foresight is impaired. Some of these changes would be undesirable if the alternative–an unchanged psychotic personality leading to complete insanity–were not much worse.



HARRIS & EWING

Drs. Freeman and Watts at work

Patients are encouraged to sing and pray.

Of their 136 cases, Drs. Freeman and Watts regard 98 as greatly improved, 23 as somewhat improved, twelve as failures. Only 13 patients are still in mental hospitals; most are back at their jobs or housekeeping after one to six years of psychotic incapacity.

Drs. Freeman and Watts by no means think that psychosurgery should be used on all psychotics. They make clear the risks–possible death, possible mental dullness from too much brain-cutting. Psychosurgery, they say, is a last resort after less drastic therapy has failed.

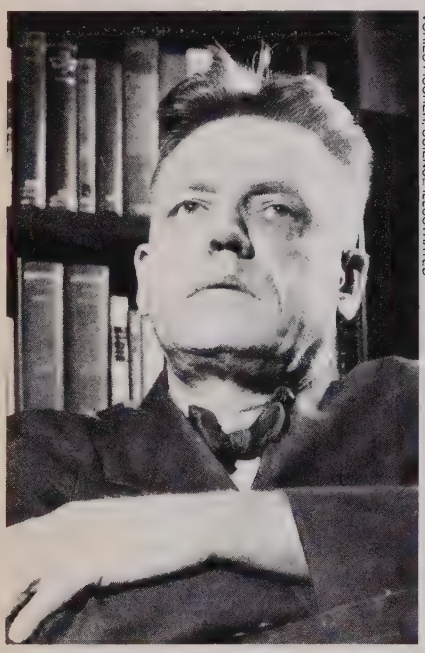
January 5, 1948

Alfred Kinsey's *Sexual Behavior in the Human Male* was published in 1948. Reactions to the book will appear in TIME for years to follow. The initial account of Kinsey's work seems remarkably fair and unbiased. The following is from the MEDICINE section of the magazine. A few months later a Letter to the Editor from a soon-to-be-famous psychologist appeared, giving support.

How Men Behave. As an expert in classifying insects, burly, Hoboken-born Alfred Charles Kinsey had 150,000 specimens available for studying a single species of wasp. As profes-

sor of zoology at Indiana University, he found no similar bank of scientific data to help answer his students' questions about the sexual behavior of human beings: the most detailed study of sex histories covered only 300 individuals. Nine years ago, Kinsey, doctor of science (Harvard) and author of half a dozen textbooks (*e.g., New Introduction to Biology*) set out to even the scientific score.

This week, after months of excited drum-beating by science writers, Kinsey published some findings in *Sexual Behavior in the Human Male* (W.B. Saunders Co.: $6.50).* Kinsey, father of three children, insists that the 804-page work is "a report on what people do, which raises no question of what they should do."



VORIES FISCHER, SCIENCE ILLUSTRATED

Zoologist Kinsey

Sex has a class angle.

So far Scientist Kinsey and his assistants have gathered 12,214 case histories of U.S. men, women & children. Kinsey himself recorded 7,036 of them. In the 20 more years they expect to spend on the study,† he and his associates will add 88,000 histories, publish eight other volumes. Their first book is based on interviews with 5,300 white males. Answers were recorded in code to avoid embarrassment, and tabulation by punch cards made the work easier.

Criminals, clergymen, clerks, teachers, students, prison inmates, men of various types and ages were interviewed and urged to tell all. As a result of the tabulated testimony, Kinsey concludes that 85% of the total U.S. male population has premarital intercourse; nearly 70% has relations with prostitutes; between 30% and 45% has extra-marital intercourse; 37% has some homosexual experience between adolescence and old age, with the highest rate among single males 36 to 40.

Class View. Sex behavior, Kinsey reports, seems to have a class angle. There is no "American pattern" of sexual behavior according to his findings; instead, there are differences as great as anthropologists find between the sexual patterns of different racial groups in remote parts of the world. The U.S. differences correspond roughly to educational levels. Many men who have gone to college, he finds, have kissed dozens of girls, had intercourse with none; but among males of lower educational levels, there is more intercourse, less petting.

In general, males of the upper levels feel that lower-level morality lacks "ideals" while the lower level feels that the college-level group is artificial and insincere in its sexual behavior–and what is worse, tries to force its patterns on others. Says Kinsey: "Legends about the immorality of the lower level are matched by legends about the perversions of the upper level."

Legal View. The class conflict in sexual customs becomes acute when the law is involved. Making and maintaining law is largely in the hands of legislators and judges from the better-educated levels: but enforcement is in the hands of police officials who are generally from grade and high-school levels. Kinsey finds that about 98% of males whose education ended with grade school have sexual intercourse before marriage; of males of high-school level, 84% of college level, only 67%. On the same basis, Kinsey holds that while a policeman on the beat may be tolerant of intercourse between an unmarried boy & girl, the judge on the bench may take a harsher view.

Kinsey finds little difference between young males of today and those of ten or 20 years ago. His statistics show that the war made little difference in sexual behavior; male sex habits, he believes, are pretty well fixed by the age of 16 anyway. In a rare try at humor, Kinsey writes: "The high officer who complained that too many mothers thought that the Army had invented sex had considerable justification for his complaint." Men acted about the same way in the armed forces as they would have as civilians; uniforms and the lack of privacy in military life merely made their acts more conspicuous.

Kinsey avoids any prescription for improvement in the sex behavior of the male. But he does think that science should revise its classifications of the "normal" and "abnormal" in sexual conduct: "In no other field of science have scientists been satisfied to accept the biologic notions of ancient jurists and theologians, or the analyses made by the mystics of two or three thousand years ago."

An interesting response was published as a Letter to the Editor on March 22.

Sir:

In discussing the Kinsey report, TIME gave the impression that though laymen book reviewers acclaim the study, experts find it unacceptable. This is quite erroneous, as the inquiry has been at all times guided by scores of experts who stand in back of it . . . By the . . . realistic standard of what has been achieved before in the study of sex, Professor Kinsey's work is clearly a tremendous advance, and warrants wide attention and respect . . .

Leo P. Crespi
Assistant Professor of Psychology
Princeton University
Princeton, N.J.

* Kinsey's co-authors: Wardell B. Pomeroy, clinical psychologist, and Clyde E. Martin, statistician, both of Indiana University.

†Supported by Indiana University, the National Research Council's Committee for Research on Problems of Sex, the Medical Division of the Rockefeller Foundation.

Snippets

Short articles and excerpts from TIME's coverage of psychology through the 1940s

March 11, 1940

The United States had not yet entered World War II, but TIME was filled with stories about Hitler and Nazi Germany in 1940. In the MEDICINE section we find a piece on "Health Under Hitler." The source is a refugee from Berlin, living in Manhattan at the time, Dr. Martin Gumpert. The article covers birth rate (low), infant mortality (rising), tuberculosis (no. of deaths down/no. of cases up), venereal disease (high) and "lunacy":

More appalling than physical breakdown is the spread of mental decay, says Dr. Gumpert. For the number of lunatics in German hospitals rose from 185,000 in 1923 to 346,000 in 1936. And new Nazi treatment for lunacy goes far beyond old-fashioned strait-jackets and padded cells...

"We have no time to lose . . . They must be collected in the concentration camps."

April 1, 1940

It is difficult today to even get beyond the title of this very short item to reflect on the insights of the article. The item is called "Smart Pickaninnies."

Everybody knows that pickaninnies can be smart as paint, but many a white doubts the innate intelligence of Negroes. A Northwestern University professor, Paul Witty, assisted by Dr. Martin Jenkins, picked out the brighter children among 8,400 Negroes in the third to eighth grades of seven Chicago public schools, gave them intelligence tests. Their findings, announced last week:

■ 29 were "gifted" (IQ 140 or above)–as many as would be found in an average group of 8,400 white children.

■ 103 were "bright" (IQ 120 or above)–again par.

■ One girl got a "genius" rating (IQ 200).

■ Bright girls outnumbered boys 2½-to-1.

■ Only subject at which the Negroes were not as smart as white children was arithmetic.

Concluded Professor Witty: "It is singular that the gifted Negro child has heretofore been considered an anomaly. The survey gives evidence that we may discover large numbers of children of superior intelligence who are at the moment unrecognized."

May 6, 1940

The Gluecks–Professor Sheldon and his wife Eleanor–spent many years studying the behaviors and treatments of juvenile delinquents. Results of their studies were published in 1940 and included the following observations:

The Gluecks made similar tables from their findings on what kind of treatment offers the best chance of reforming a delinquent. Some tips:

■ A Russian father's son who has been well disciplined by his parents and got along well at school will do best under probation.

■ A German's or Irishman's son whose parents quarrel, who has not misbehaved in school and who belongs to a gang had better go to a reformatory.

■ A son of uneducated, delinquent parents of mixed religion, living in a bad neighborhood, should join the Army or Navy.

July 1, 1940

It's hard to say whatever became of *this* theory. Perhaps we need constant reminders that correlations do not imply cause and effect relationships. From the MEDICINE section, in full, titled "Brains and Allergy":

Many Phi Beta Kappas suffer from hay fever. This fact did not escape the notice of Dr. Buenaventura Jiménez Serra of the University of Michigan health service. He began to match records of students' allergies with the records of their entrance examinations. Last week Dr. Jiménez, just in time for the hay fever season, broadcast a consoling item. Allergy, said he, is a symptom of intelligence. On college achievement tests, he found, students suffering from hay fever, asthma and eczema rate five to ten percent higher than their non-allergic fellows.

For his ingenious theory Dr. Jiménez has an ingenious explanation: people who are allergic, says he, also have "hypersensitive brain cells."

September 16, 1940

Somehow it seems that the observation that there is a positive relationship between emotionality and stomach acid secretion is a very old one. However, it was the lead story picked up in 1940 from the annual meeting of the American Psychological Association. Also mentioned in the article is an application of classical conditioning techniques.

It was intended to measure something that psychologists and doctors have long believed and all sufferers knew anyway–that distressing emotions cause increased amounts of hydrochloric acid to be poured out in the stomach, are thus linked to such stomach disorders as "heartburn," dyspepsia, gastric ulcer. The experimenters were Drs. Bela Mittlemann of New York Post-Graduate Hospital and Harold Wolff of Cornell Medical College. Not only did they find that emotion induced increase of stomach acid, but they also measured the increase.

Obvious indication: psychotherapy as well as medical treatment for stomach disorders.

Economy. Professor Herbert A. Toops of Ohio State University was credited by a colleague with an idea applying the principle of the conditioned reflex to electrified cattle fences. After repeated shocks, cattle learn to keep away from the fence entirely and the current can be turned off to save money. One vicious old bull had such a fine reflex that it kept warily to the almost precise geometric centre of the pasture. If the reflexes show signs of deterioration, they can be renewed from time to time by a few hours of electrification.

September 30, 1940

A new form of psychosurgery is added to the arsenal of defenses against schizophrenia–which, by the 1940s, is no longer referred to as "dementia praecox."

Schizophrenia, the kind of insanity characterized by withdrawal into a dream world, is the most widespread mental disease in the U.S. In recent years convulsions induced by insulin, metrazol, azoman and electric shock have improved many schizophrenics. Last week Dr. Edward Adam ("Streck") Strecker, a U. of Pa. psychiatric bigwig, described a new brain operation for schizophrenia. It is called pre-frontal leucotomy, involves drilling a small hole in the temple, inserting a narrow, flat-bladed instrument with which a fan-shaped cut is made in the brain lobes.

Eisenhower, 1942

The operation, first devised in Spain, was performed on eight schizophrenics by Dr. Francis Clark Grant, U. of Pa. professor of neurosurgery. The results, declared Strecker, were "interesting and sometimes truly amazing."

October 7, 1940

Fifty years ago, it was apparently widely believed that changing a child's natural handedness could lead to extremely negative consequences, including stuttering. The following is the full report, titled "Left to Right."

Many a modern psychiatrist believes that trying to make a left-handed child write with his right is a crime only less heinous than making him eat spinach. Their theory: switching hands upsets a child emotionally, often causes stuttering. Last week a graduate student at Syracuse University threw doubt on this theory. Prompted by Professor Harry J. Heltman, chairman of Syracuse's School of Speech, Graduate

Student Elizabeth Daniels had examined 1,594 Syracuse freshmen, learned that:

■ 1,422 students were right-handed, 138 ambidextrous, 34 left-handed, 77 converted from left- to right-handedness.

■ Stuttering was more than twice as common among left-handed and ambidextrous students as among right-handers. Proportion of stutterers in each group: left-handers: 2.9%; ambidextrous: 2.9%; right-handers: 1.1%.

■ Of the 77 switched from left to right, only one (1.3%) stuttered.

December 23, 1940

To some psychologists, having a high IQ can be as much a curse as having a low one. Teachers College of Columbia University held a conference on Education for the Gifted in honor of their own Dr. Leta Hollingworth, who had died the year before.

The late Dr. Leta Stetter Hollingworth, a plump, motherly professor of education at Columbia University's Teachers College, all her life deplored mankind's inhumanity to geniuses. Eighteen years ago, as an experiment, she picked 50 of the brightest children (IQ of 130 to 200) in New York City, started two special classes for them at Public School 165, near Columbia. Like Stanford University's Professor Lewis M. Terman who for 18 years has followed the careers of 1,300 gifted Californians, Dr. Hollingworth watched her "geniuses" as they grew.

Hope, 1943

To the learned educators, industrialists and doctors who had gathered to ponder these problems, famed Psychologist Edward Lee Thorndike made a concrete proposal: let the U.S. establish State asylums for underprivileged geniuses to match its asylums for the feeble-minded.

January 20, 1941

By 1941 Britain was heavily at war–on the home front as well as overseas. Despite many fears to the contrary, disease throughout the country had risen very little. In fact, there was a significant decrease in reports of mental illness.

Mental illness of all kinds have greatly decreased, and hospitals which formerly dealt with neurotic cases have now opened their wards to Blitz casualties. London divorce cases have dropped about 50% because, according to a prominent lawyer, "People are ashamed to dwell on their own emotional troubles in war."

May 26, 1941; August 31, 1987

In May 1941, close friend of Adolph Hitler and Deputy to the Führer Rudolf Hess fled Germany to Scotland. Hess claimed to be following the orders of a supernatural power and had flown to Britain to end the war (parachuting into a farmer's field). He was arrested, sent first to Nuremberg Prison, and then to Spandau Prison in West Germany, where he died in August 1987–the last of Nazi hierarchy. Here are two quotes on Hess, the first from May 1941, the second from August 1987.

U.S. psychiatrists last week had a field day–in private and in public–explaining the method and madness of Rudolph Hess. Some of the remarks:

Dr. Leo Alexander of Boston: "Hess may be a constitutionally paranoid personality who may be expected under stress. . . to break down into full-fledged paranoia."

"Even after his transfer to Spandau in 1947, Hess's loyalty to Hitler endured. He initially goose-stepped along the prison corridors, snapping the Nazi salute. Given at first to rages and bouts of persecution mania, Hess settled into a routine of numbing regularity."

June 23, 1941

Evidence that epilepsy is more a disease of the brain than of the mind comes from a "natural experiment" of the sort that can only occur in wartime.

Despite bombings, sirens and frequent routings out of bed, the 450 inmates of the Lingfield Epileptic Colony at Lingfield, Surrey have remained "unperturbed." Many doctors think that epilepsy is brought on by fright, worry or terrific shock. But Dr. Joseph Tylor Fox, head of the Lingfield colony, reported: "There was no general increase of [epileptic] attacks on days or nights of air activity, nor has any evidence been found of increased fits in individuals." This observation tends to confirm the theory that fits are caused by damage to the brain, not by psychological shock.

September 15, 1941

This charming little "filler" is quoted here in its entirety. Its title: "People, Goldfish."

Last week U.S. psychologists powwowed at Northwestern University, reported:

■ Goldfish remember better in cold water than in warm water.

■ Young children grow faster mentally in the cool fall and winter months than in the warmer seasons.

■ Man's intellect is at its sharpest between the ages of 35 and 40, according to Professor Harvey Christian Lehman, 52.

December 1, 1941

The week before Pearl Harbor, TIME reports that the war is having positive effects on the sanity of the British.

The British people, too busy to worry about personal troubles, have so few neuroses in World War II that psychiatrists have less work than they expected. Said Dr. Robert Dick Gillespie, psychiatric specialist with the R.A.F., as he arrived in Manhattan last week: "In the 30 years since I left elementary school I have never been more idle than when serving in the Royal Air Force." Speaking with an occasional Scottish burr, Dr. Gillespie cited facts & figures to prove British sanity. Some of his data:

■ A large hospital set aside for psychiatric cases of the R.A.F. stood empty for so long that is was finally turned over to general use.

■ Guy's Hospital, a "social center" in one of London's worst bombed areas, reported no increase in psychiatric cases since the war; there were also very few cases of neuroses caused directly by war experiences.

■ "I have had difficulty collecting instances of bomb fright among children," said the doctor. Of 8,000 Bristol school children, only four percent showed symptoms of terror after air raids.

For all these encouraging facts, Dr. Gillespie had a ready explanation. The British are very busy with integrated social activity, have little time to worry about personal troubles.

March 2, 1942

This is the entire entry in the MISCELLANY column:

In Manhattan, two psychologists reported that when they presented a rat with a difficult problem he bit his nails.

April 20, 1942

The obituary of Raymond Dodge:

Raymond Dodge, 71, professor emeritus of psychology at Yale; in Tyron, N.C. His discovery that the human eye progressed on the printed page not smoothly but in a series of jumps and pauses caused a revision of standard methods of teaching reading in elementary schools. He was one of the three original directors of Yale's famed Institute of Human Relations.

April 27, 1942

Behavior therapy begins. The following account of aversion therapy is as accurate as–and somewhat more colorful than–any description you could find today.

If a drunkard can be made to vomit every time he takes a drink, he has a better than even chance of curing himself–at least for a long time–of drunkenness. This nauseous conclusion was published in the *American Journal of the Medical Sciences* last week by Drs. Walter Lyle Voegtlin, Frederick Lemere, and colleagues of Seattle's Shadel Sanitarium, who carried out conditioning experiments with 827 alcoholics during the last five years.

An alcoholic taking the "conditioned reflex therapy" is first given an injection of emetine, which is unbeknownst to him, a powerful regurgitant. The conditioning takes place in a small, drab clinic furnished with a kind of throne for the patient and a number of large white enamel pans. On a throne-side table are "all conceivable types of liquor."

The patient sits down with a pan on his knees and is glumly offered a drink. Almost as soon as he lifts the glass to his lips, the emetine works, and he starts to retch, sometimes suffering "six to eight hours of uninterrupted nausea . . ." This bitter experience is repeated from two to ten times.

Result: 532 (58.6%) of the patients have remained abstinent for at least six months; of 142 whose behavior has been watched for more than four years, 44.7% have remained teetotalers. Drs. Voegtlin and Lemere say patients should return occasionally for re-conditioning.

March 22, 1943

ECT, or electroconvulsive therapy, described by someone who has experienced it. There have been any number of such "firsthand" accounts since, but this was, no doubt, one of the very first.

A sucessful case of electric shock treatment for mental disorder was described in the London *Spectator* last week by a British journalist named GeoffreyHoldsworth.* Wrote he:

"It has been my misfortune to suffer from a manic-depressive temperament for most of my existence. It has been like walking over a level country scored by deep gullies . . . Circumstances . . . brought on an attack of depression from which I seemed unable to extricate myself unaided . . . [A specialist] prescribed a course of Electrical Convulsant Therapy.

"I was required to abstain from food for four hours before the treatment . . . When my turn came, I went into a room and lay on what looked like a surgical couch. My clothes were loosened, such things as collar studs and tiepin removed. My temples were then scrubbed with ether soap. Two electrodes were placed on my temples, and were kept in place by a rubber band across my forehead. A gag was put in my mouth.

"All this time I was conscious, though becoming drowsy as a result of the ether cleansing. The instant the shock button was pressed I lost consciousness. The next thing I knew was that I was lying in a cubicle with my escort sitting beside me... For some minutes I could not remember where I was or that I had had the treatment. Gradually memory and mental clarity returned . . .

"I had treatment once a week. It took several shocks to produce improvement; but then it was marked. I am bound to say that I feared and disliked the treatment . . . After ten treatments I was much better, but after some weeks without treatment I relapsed, and had five more . . . Again I relapsed. I tried hard to get well without further treatment; I dreaded the experience. But I had to go back, this time willingly, my resistance overcome at last.

"Now I am a completely fit man . . . infinitely better than at any time in the past . . . I can look back with detachment on my illness, knowing that in the unlikely event of its returning, a few maintenance treatments will put me right."

* Husband of novelist G. B. Stern.

February 16, 1948

We'll simply present this item from the MISCELLANY column without further comment:

In Bar Harbor, Me., Dr. Clarence C. Little proudly announced that he had developed a strain of neurotic mice "so afraid of women that they will jump on a chair."

May 31, 1948

The obituary of Maria Petrova:

Maria Kapitonovna Petrova, 72, star pupil and longtime colleague of the late, great Physiologist Ivan Pavlov in his studies of conditioned reflex (by experiments with dogs); in Leningrad. She carried on Pavlov's studies after he died in 1936, published more than 100 works, lived according to Pavlov's precept: happiness is nothing, the dogs mean all.

May 31, 1948

Is it any wonder that the terminology found in this article is no longer in use? Remember, in the 1940s, these were acceptable and technical terms, commonly used to refer to the retarded and/or the developmentally delayed. The article is titled "Life of the Moron."

Psychologists classify a moron as one grade above an imbecile, two above an idiot. He has a mental age of eight to twelve, an IQ between 50 and 70. How does he get along, or does he? Dr. Ruby Jo Reeves Kennedy, sociologist at the Connecticut College for Women, made a survey of 256 morons, decided that in these days of full employment, the moron is generally employable and doing surprisingly well for himself.

Hitler, 1945

The typical male moron, Dr. Kennedy reported in Boston last week to the American Association on Mental Deficiency, is a semi-skilled worker earning between $35 and $55 a week, compared with the U.S. average industrial wage of $51.50. He gets to work on time, gets along very well with people smarter than he is. Movies are his favorite entertainment, though he also listens to the radio regularly. He marries, at an average age of 21.9 years, a wife who went farther in school than he, and has an average of one child. Dr. Kennedy made no test of the child's intelligence.

The female moron makes more money than the normal industrial worker, but doesn't save her money.

ILLUSTRATION FOR TIME BY DEVIS GREEBU

The 1950s

Lobotomies examined; drugs enter psychiatric wards; deviant sexual behavior; Skinner puts boys in box

The decade of American peace and prosperity opened in contention. North Korean troops crossed Southern borders carrying the seeds of Communism, and the Cold War's first truculent battle began. McCarthy manufactured Red suspicions and sent the country into a leery panic. Truman O.K.'d the H-bomb. Sputnik's orbit ushered in the Space Age. The Dalai Lama fled Tibet. Then Elizabeth II took the throne, Fidel took Cuba, the Mau Mau took exception to European control, and Malenkov took over when Stalin passed away. In the streets of Montgomery, Alabama, Martin Luther King Jr. voiced a dream that would fuel a nation in its perpetual struggle for Civil Rights. Behind the white picket fences of a nation, 2.3 children and a two-car garage made us one big nuclear family. Then a dog named Checkers kept Nixon on the ticket, and the White House opened its doors to Ike; an Administration of peace and conservatism watched over a nation wholesomely captivated by 3-D glasses, color TV, the hula hoop and *Blue Suede Shoes*.

February 27, 1950

It was nearly 40 years ago, but in 1950 it appeared that the time had come to put advice to parents into some historical perspective. Such is the thrust of this short article.

Bringing Up Parents. Fashions in child training are as extreme, and change almost as much, as women's hats. In the last two decades there has been a complete revolution in the nursery and playroom. In the *Journal of Pediatrics*, Dr. Celia B. Stendler of the University of Illinois' College of Education describes it: "From an era where the mother was taught that the child must have his physical wants cared for and then be left alone, must be fed on a rigid schedule, must learn to cry it out, must be toilet-trained early and must not be spoiled by attention, we have come to a time when exactly the opposite advice is advocated.

"Today the mother is advised to feed the baby when he's hungry, to delay toilet training until he's ready for it, to see that the baby gets a reasonable amount of cuddling and mothering, to let the baby initiate the weaning process . . . There appears to be considerable question whether the new doctrine is any sounder than the old."

Mother Knows Best. Checking the back files of magazines (*Ladies' Home Journal*, *Woman's Home Companion* and *Good Housekeeping*), Dr. Stendler found that in 1890 there were about

s many articles telling mothers how to bring up their children as here are nowadays. The volume of advice stayed fairly constant hrough all the intervening years. But the tone changed.

A turn-of-the-century Gibson girl who became a wife & nother was exhorted to be "good, honest, cheerful and orderly, ecause whatever kind of behavior she portrayed, the child would mitate . . . Mothers occupied a position of importance which they ave never since recovered. This was the day when Mother knew est; there was no book, no scientific authority to shake her naternal self-confidence . . . Her 'instincts' were right." She was ot told when to feed the baby, nor was she told not to pet him.

SATURDAY REVIEW OF LITERATURE

"But there's an even newer theory out, dear–You're *supposed* to hit them!"

In 1900 a writer spelled it out: "Love, petting and indulgence will not hurt a child if at the same time he is taught to be unselfish and obedient. Love is the mighty solvent."

Discipline & Love. After 1910 came the most abrupt change. Instead of love, stern discipline was recommended. To stop nail-biting, one expert wrote: "Get some white cotton gloves and make her wear these all the time–even in school. They will not only serve as a reminder, but also make her ashamed when people ask her about them." Obedience was to be required at all times, "and if temper tantrums resulted, they should be ignored."

Then came psychology–Watson's behaviorism and Freud's psychoanalysis. As a result of the former, "parents were told that if a baby were . . . picked up just once when he cried, he would be 'conditioned' [to expect it] . . . On the other hand, a properly trained baby would result if 'everything done for him [were] so regular that one can tell time by what is going on in the nursery."

In the 1920s, young mothers rejected every last remnant of Victorianism. Mother love was replaced by "science." Freudianism was being "interpreted to mean that repression was bad for the child." The "feed-'em-on-schedule, let-'em-cry-it-out" school of thought was in command.

The fight against metronome maternalism gathered strength through the 1930s. By 1940, an authority wrote: "It is reasonable to feed a baby when he's hungry. It is unreasonable to make him wait . . . " That is the prevailing fashion today.

There is still plenty of room for progress in child training. So far, the emphasis has been on what to do with the child. "What we can do," Dr. Stendler says, "and what certainly needs to be done, is to help parents develop insight into their own personalities in the hope that they can more intelligently approach problems of child rearing. No trend in this direction has been noted . . ."

May 28, 1951

The prefrontal lobotomy is a psychosurgical procedure that today's students read about only for historical perspective. The procedure was introduced in 1938, but has not been used for more than a generation.

Grey Matter. Psychosurgery is older than the pyramids, though ancient man didn't call it psychosurgery. When he picked up flint and mallet and cut a hole in his brother's skull, he was often just looking for a way to let the evil spirits out. Modern medical science not only has better tools and a sounder vocabulary, but believes it knows where to look for the trouble, *i.e.*, in the front part of the brain.

In the last 14 years psychosurgeons have performed thousands of operations on the frontal lobes. They still do not agree on just where or how to open the skull or what tissues to cut.

In the current issue of *Surgery, Gynecology and Obstetrics*, half a dozen top U.S. psychiatrists and surgeons set out to compare methods and results. Columbia University's Dr. Lothar B. Kalinowsky points out a few things the experts are agreed on, notably that the frontal lobes are the seat of anxiety feelings, and that cutting nerve fibers in, or connected with, the lobes can reduce anxiety feelings when they occur with pathological intensity.

After Shock Fails. Psychiatrists and surgeons are also agreed, says Dr. Kalinowsky, that surgery is a last resort in mental cases, a measure not to be taken until all other treatments, including shock, have failed. Reason: psychosurgery in some cases has "undeniable side effects" (chiefly damage to the personality such as apathy and irresponsibility). Schizophrenics are the usual subjects, largely because nothing else seems to help them much.

What actual surgical procedures work best? Washington's Dr. Walter Freeman, who (with Dr. James Watts) pioneered psychosurgery in the U.S., staunchly defends two operations in which he has specialized. Freeman and Watts performed 624 prefontal lobotomies. In this operation, a hole is drilled through the skull back of each temple, and a dull, rounded knife is inserted to cut white nerve fibers connecting the frontal lobe with the thalamus, a neural relay station at the base of the brain. Freeman reports good results in 41% of such cases and fair in 34%, admits poor results in 22% (deaths in 3%).

This is a radical operation, difficult even when performed by highly skilled specialists. So Freeman and Watts tried something simpler: the transorbital lobotomy, so called because the instrument is inserted through the eye socket. Freeman reports good results in 47% of 316 cases, fair results in 23%, poor in 28% (deaths in 2%).

A Look Inside. Many doctors were not satisfied that it was safe or wise to make these "blind" cuts inside the brain. Some of them developed "open" operations, in which, for example, the surgeon saws out a wide piece of skull above the middle of the forehead, or two smaller pieces over each temple, so that he can see what he is cutting. Boston's Dr. Harry C. Solomon reports on hundreds of such cases and on still more variations. Sometimes only one lobe was cut (this seemed to be less successful); in other cases both lobes were cut near the midline of the brain, leaving the part near the temples.

Columbia's Dr. Paul H. Hoch tells of his group, which took a different tack. They tried to spare the long white fibers, and actually cut out a piece of the brain's grey matter, catching only a few white fibers. Usually they took out about an ounce on each side, in an operation called a topectomy.

Since important impulses to & from the frontal lobes must pass through the thalamus, a Philadelphia team headed by Dr. Ernest A. Spiegel decided to operate on this central clearinghouse. They drilled a hole through the top of the skull, sank a hollow needle through the brain. When its electric tip touched the thalamus, it seared some of the nerve nuclei. Few other U.S. surgeons have taken up this difficult operation (thalamotomy).

Dr. Spiegel reports on 43 patients, about half of whom were improved.

The Price Paid. None of the reporting doctors was more concerned with the side effects of psychosurgery than Dr. Edward K. Wilk of Taunton, Mass. "Personality blunting," he says, "has been the inevitable price paid for a complete lobotomy operation [and] reveals itself in the higher realms of creative imagination, foresight, ambition and social sensitivity." Some long-confined schizophrenics are so far gone that this damage might hardly show. But the less severe the case, the greater the risk. And if psychosurgery is to be used in other psychoses, and even in neuroses, says Dr. Wilk, personality damage cannot be tolerated.

He favors still another type of operation, developed by Yale's Dr. William B. Scoville. Called "selective cortical undercutting," it involves choosing one of the three main areas of the frontal lobes and making a local cut where the grey matter joins the major white fibers. Weighing results in 150 cases, Dr. Wilk considers them as good as those from complete lobotomies. And personality damage was vastly reduced, to the point where he thinks the selective operation might be used for serious neuroses.

In all the experts' reports there was an unreality about comparisons. The very nature of mental illness makes it impossible to grade patients like fruit. "Improvement" can be a matter of opinion. Some hospitals will discharge patients that others would keep. The best estimate: one-third of psychosurgery patients get well enough to be sent home, one-third are improved but have to be kept in the hospital, one-third get no benefit at all.

June 30, 1952

It Didn't Work. Millard Wright had spent 15 of his 38 years in jail when, in an attempt to cure his urge to steal, he had a prefontal lobotomy (cutting of nerve pathways in the forebrain). That was five years ago (TIME, July 14, 1947). For his possible contribution to medical science, Wright drew a light sentence, and he behaved so well that after 2½ years he was paroled. He got married, worked as a bus washer, and his lawyer and physician thought he was going straight.

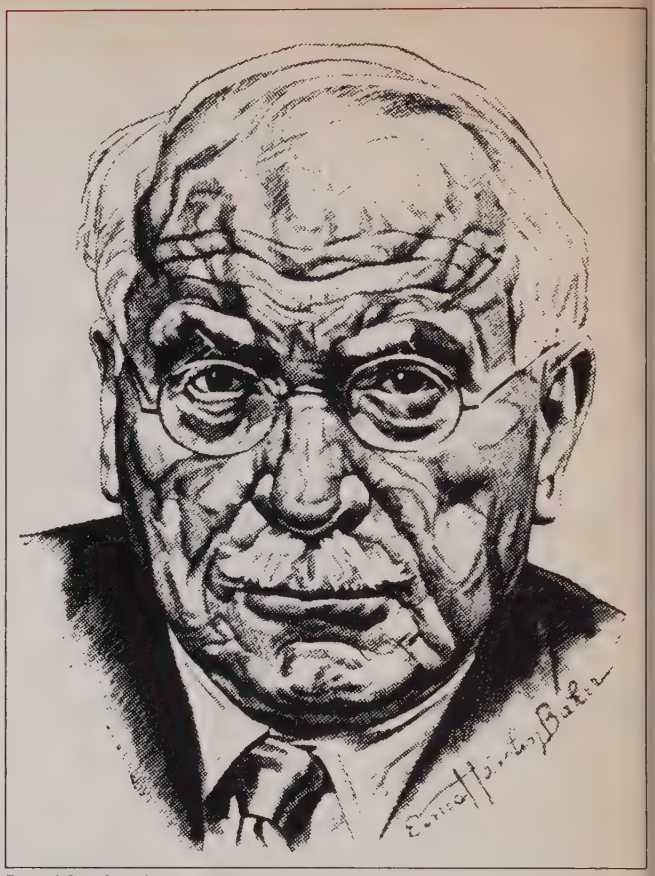
But in Pittsburgh last week, Wright was identified as the man who had passed some stolen articles. In his home, police found thousands of dollars' worth of goods. Back in jail, Wright said simply: "With me, it just didn't work." Dr. Edward E. Mayer, Allegheny County court behavior expert, went further: in his opinion there was never any reason to believe that it would work, because a lobotomy reduces self-control.

When detectives asked Wright why he had gone back to crime, he shrugged and said: "You fellows know the questions, so you ought to know the answers." The truth was that neither the detectives nor the neurosurgeons were any nearer to knowing what makes an incurable thief, let alone how to cure one.

July 7, 1952

In 1952, TIME ran a series of biographical sketches of famous persons. The following is the story on Carl Jung.

Carl Gustav Jung, of Zurich, is not only the most famous of living psychiatrists, he is one of the few practitioners of that craft who admit that man has a soul. And by soul, Jung means not just a psychiatric psyche but the old-fashioned kind that might even go to heaven. He is an unabashed user of the word "spiritual," and a strong believer in the practical utility of conceptions like God and the Devil. Unlike the orthodox followers of Sigmund Freud, who attribute most of mankind's mental troubles



Psychiatrist Carl Jung

to the sexual conflicts of infancy, Jung maintains that the religious instinct is as strong as the sexual, and that man ignores it at his peril. Though his ideas cut freely into areas traditionally assigned to the mystic, the theologian and the philosopher, he maintains stoutly that he is a scientist. His methods, in his own view, are as empirical as those of Albert Einstein.

The ebullient state of Dr. Jung's own psyche is a striking argument for the soundness of his ideas. He is a massive 76-year-old man, who seems to row himself joyfully about his home in suburban Küsnacht with large, oarlike hands. He lives a happy domestic life with his wife, who is a practicing psychiatrist; they have no grandchildren. He speaks English with an American accent and vocabulary, explaining that he considers American English more emotional and directly influenced by the unconscious mind than English English is. His white hair usually looks as though he had just come in out of a high wind. His laughter often shakes the walls of the room, and he will discuss his ideas by the hour, sometimes humorously, with nearly anybody who happens to visit him. These discussions, accompanied by toothy grins and constant puffs from a pipe, are so lengthy and enthusiastic that they sometimes seduce him from more important work.

At the moment, the work consists of a three-volume treatise on alchemy–part of a veritable library of esoteric and clinical literature which Jung hopes to leave behind as his testament to humanity. This may seem a somewhat bizarre occupation for a psychiatrist. But Jung explains that alchemy is one of those fantastic areas in which the mind has expressed itself unconsciously–a world of mysterious symbolism which can be interpreted psychologically, just as dreams are. There are times when Dr. Jung actually seems to resemble a sorcerer rather than a

psychiatrist. He loves to sprinkle his writing with scholastic terms from the Middle Ages. His home is filled with strange Asiatic sculptures. He wears a curious ring, ornamented with an ancient effigy of a snake, the bearer of light in the pre-Christian Gnostic cult. When hard at work, he often disappears for days into a towered, castlelike hideaway across the Lake of Zurich, where he does his own cooking, and diverts himself by chopping wood and carving esoteric inscriptions on large blocks of granite. Jung has long since given up his psychiatric practice, and now devotes his working hours to exploring the dim boundaries where science meets the irrational.

How does one reduce the idea of God and the Devil to scientific terms? In Jung's view, they are manifestations of age-old archetypes present in the more obscure layers of the human mind since the earliest times. Jung's discovery of these archetypes dates from before 1912 when, as an associate of Freud, he noted that myths, fairy tales and religious visions were similar in many ways to dreams, and could, like dreams, be interpreted as emanations from the unconscious mind. Jung also noted that the myths and religious symbols of widely differing peoples and epochs had certain marked similarities, and were apt to include the same cast of characters. Among these characters he discerned a primordial image called "the shadow," which was usually embodied in figures like Satan. Others were the "anima" (the "woman in man," *i.e.*, the female component of the masculine psyche, represented concretely in images ranging from Helen of Troy to the modern pin-up girl), the "animus" (corresponding male image, in the female psyche), the "great earth mother" (representing the material aspects of nature), the "wise old man" (personification of the spiritual principle, *i.e.*, God). If all mankind dreamed more or less alike in its legends and religious symbols, it was reasonable to suppose the existence of a universal unconscious mind–a vast reservoir of wisdom from which these dreams arose. Jung termed this reservoir the "collective unconscious," thereby adding a new dimension to the Freudian psyche. The goal of Jung's therapy, unlike that of Freud, lay in what he called "individuation," a process by which the archetypes and other disturbing elements of the unconscious were brought to full consciousness. It was essentially a religious experience, and a way of life.

The religious, esthetic and anthropological ramifications of Jung's ideas have tinged an astounding amount of contemporary thinking. Religious men, ranging from Hindu yogis to Christian theologians, have studied Jung, though the latter have found his dream world of primordial archetypes to be a pagan rather than a strictly Christian one. Orthodox Freudians have denounced his ideas as pure mysticism. Artists, poets and dancers have found in them a new vein of poetic inspiration.

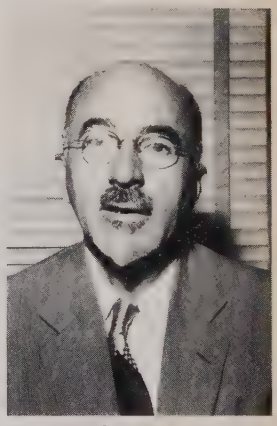
Jung himself is inclined to agree with both his admirers and his critics. His own conception of religion is so eclectic that it embraces everything from Catholicism to Hinduism, Taoism and Zen Buddhism, and finds truth of some sort in nearly every form of dogma and ritual. "His principal weakness, aside from overeating," a close associate recently remarked, "is his habit of seeing all points of view and agreeing with practically everybody." "The idea of an all powerful being," says Jung himself, "is present everywhere, if not consciously recognized, then unconsciously accepted . . . I consider it wiser to recognize the idea of God consciously; otherwise, something else becomes God, as a rule something quite inappropriate and stupid, such as only an 'enlightened' consciousness can devise."

When Jung is not pondering the relation of modern man to his soul, he is apt to be found sailing a small ketch on the Lake of Zurich, or reading an endless chain of violent detective stories, sometimes at the rate of one a day. Though his large, snow-peaked figure is a familiar sight in and around Zurich, very few of his fellow citizens have the slightest idea who he is, and most of them think of him vaguely as a pleasant old man who likes people and dogs. Dr. Jung, in approaching a dog, will pat its head and observe gravely that dogs dream, and therefore have some part in the collective unconscious too. "Oh yes," he will continue, "certainly the higher animals participate in it. It is easy to communicate with them. Of course, with the lower forms it is more difficult. Personally, I have never been able to establish a satisfactory rapport with a snake . . ."

The closest rapport Jung has ever established is evidently the relationship he holds with scores of former women patients. Four-fifths of his patients have been women, and their ecstatic reaction to this experience has been so universal that Zurich wits have evolved a name for the type. They call it the *Jungfrau*. This slightly embarrasses the still rosy-cheeked Dr. Jung. "It's silly," he protests. "After all, I am an old man–much too old to have any vices."

September 15, 1952

Mass Lobotomies. The patients suffered from a variety of mental disorders. Some had anxiety neuroses, others fought against irrational fears, morbid thoughts, hallucinations, a few had drifted into suicidal depression. But for all of them the treatment was the same. Strapped to an operating table, they got three quick jolts of electricity–enough to start violent, involuntary convulsions before they lapsed into anesthetic coma. Next a thin, icepick-like leucotome was inserted under each eyelid, hammered home through the eye socket and into the brain. Carefully manipulating the two icepicks, the doctor severed the connection between thalamus and frontal lobes in the patient's brain. The entire operation took only ten minutes.



Neurologist Freeman

By the time he finished his experiments with patients in West Virginia mental hospitals last month, Washington Neurologist Walter Freeman had supervised or performed more than 200 of these transorbital lobotomies (TIME, May 28, 1951) in two weeks. He already had more than 1,000 other lobotomies to his credit. Many doctors still doubt the wisdom of Dr. Freeman's surgery. "Lobotomy," explained one psychiatrist last week, "is an operation of deduction rather than addition." It does irreparable damage to that part of the brain which is believed to control reason and judgment. It should only be used as a last resort, in desperate cases when all else has failed. But Dr. Freeman, who once said, "I won't touch them unless they are faced with disability or suicide," now believes that "it is safer to operate than to wait." Lobotomy, he insists, "should be considered in a mental patient who fails to improve after six months of conservative therapy."

Many psychiatrists also hesitate before the uncertain results of lobotomy. Completely successful, the operation may relieve a patient's tensions. It can also eliminate fear of pain. Dr. Freeman estimates that within six months, 100 of his West Virginia patients will have improved enough to leave the hospital. And getting people out of mental hospitals is his main objective.

But for the rest of the patients, and even those who are discharged from the hospital, the operation may be too "successful." Free from anxiety, they may become, instead, irresponsible, tact-

less, indolent. They will probably have trouble making up their minds, and may hear voices or echoes. Worse than that, some may regress into placid animals, helpless for the rest of their lives.

By last week, Dr. Freeman had these statistics from his West Virginia experiment: of 228 patients, 86 have been discharged from the hospital; five have already returned. There are 36 more ready to go home as soon as their families can take them. Another 29 have shown some improvement but still need hospital care. Of the 77 remaining, 73 have shown no improvement; four have died.

August 31, 1953

Pavlov Rides Again. At a mental-health congress in Vienna last week, before psychiatrists from 41 nations, Professor Nikolai Oserezski laid down the Soviet line: the brain operation known as lobotomy "is an anti-physiological method that violates the principles of humanity."

Russian psychiatrists have long frowned on lobotomy, a drastic operation developed in Portugal and the U.S. but by no means approved by all Western specialists. For a generation, Russia's doctors have been conditioned to follow, sheeplike, the late Ivan Petrovich Pavlov, of conditioned-reflex fame. Following his patterns, they believe that if any part of the physical brain is damaged or destroyed, the mind is damaged beyond repair. Lobotomy, argued Oserezski, damages the high brain centers and turns a human being into a vegetable. He quoted a Soviet colleague as saying that it "makes idiots out of madmen." He also put it in ideological terms: "By performing a lobotomy, the surgeon is guilty of propagating a therapeutic nihilism . . . "

June 14, 1954

There is simply no doubt that the "big story" in psychology–and in medicine–in the 1950s was the introduction of psychoactive drugs used successfully for the first time as a treatment for mental disorders. The so-called "drug revolution" of the 1950s is still going on, with new drugs being introduced on a regular basis. Imagine the excitement when drugs–such as chlorpromazine and reserpine–were first found to be effective. Here are three related reports. The first is a major story about Laborit's famous "lytic cocktail." The second is a very brief announcement (from the CAPSULES section a week later) of the discovery of reserpine. The third article in this set is a summary piece done two years later. It is just a bit overoptimistic; stories about negative side-effects had not yet become popularized.

Wonder Drug of 1954? Working on an antihistaminic drug which they had developed for the control of allergies such as hay fever, researchers at France's Rhône-Poulenc laboratories found that the drug made many people sleepy. For a world in need of sedatives, they took the logical step of trying to put together a related chemical that would make people even sleepier. What they found (in 1950) and first tagged 4560-RP, or chlorpromazine hydrochloride,* is now the most exciting new drug seeking recognition in the world's pharmacopoeias.

By any name, chlorpromazine is a versatile and fantastically interesting drug to medical researchers. Peppery young (38) Dr. Henri Laborit, who darts from experiment to experiment in his Paris laboratory at Val de Grâce Hospital, used the brand-new chemical on animals late in 1950. He found that it worked against shock and produced the effects of hibernation. Laborit promptly organized a research team to make the most of these effects, and from its combined efforts came the "lytic cocktail." In this, chlorpromazine is combined with Phenergan and Dolosal to block the automatic nervous system.

For Operations & Mental Cases. With physical chilling after a lytic cocktail, a patient's temperature can be dropped to 80° F, or even lower. His metabolism is slowed so sharply that even his brain needs little oxygen. French surgeons using the Laborit technique have performed hundreds of operations (for everything from heart disease and advanced cancer to a ruptured appendix) on patients rated as poor risks for ordinary anesthesia. Laborit reports no cases of surgical shock, and a good cure rate.

Laborit found U.S. doctors the most cautious in their approach to the new drug. They are still skeptical of his lytic cocktail, and have set 80° as the lowest temperature to which a patient can be dropped without danger of heart failure. But they have found plenty of other uses for chlorpromazine. Just as it serves as a preamplifier for anesthetics, it intensifies the effect of barbiturates and narcotics. Thus, patients with unbearable pain can get along with less morphine–and, hence, less danger of becoming resistant or addicted.

France's Laborit

Sleepy and sleepier.

By itself, chlorpromazine is a star performer. For several types of mental patients, especially senile psychotics, it serves as a highly effective relaxer. After a few doses, says Dr. Charles Wesler Scull of Smith, Kline & French (the U.S. manufacturers), patients who were formerly violent or withdrawn lie "molded to the bed." When a doctor enters the room, they sit up and talk sense with him, perhaps for the first time in months. There is no thought that chlorpromazine is any cure for mental illness, but it can have great value if it relaxes patients and makes them accessible to treatment. The extremely agitated or anxious types often give up compulsive behavior, a surface symptom of their illness. It is, says Dr. Scull, as though the patients said, "I know there's something disturbing me but I couldn't care less."

* Alias 2601-A (TIME, Oct. 12), trademarked Thorazine in the U.S. alias Largactil in France, Britain and Canada, Megaphen in Germany and Ampliactil in Argentina.

June 11, 1956

Pills for the Mind. U.S. psychiatrists are busy digesting a mass of research reports on the revolutionary use of drugs to relieve tension and to make mental patients more accessible to treatment. How are the early "tranquilizer" drugs standing up un-

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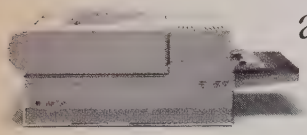
If Maslow were in c
one more thing

When A.H. Maslow constructed his hierarchy 45 years ago, he believed man had five essential needs.



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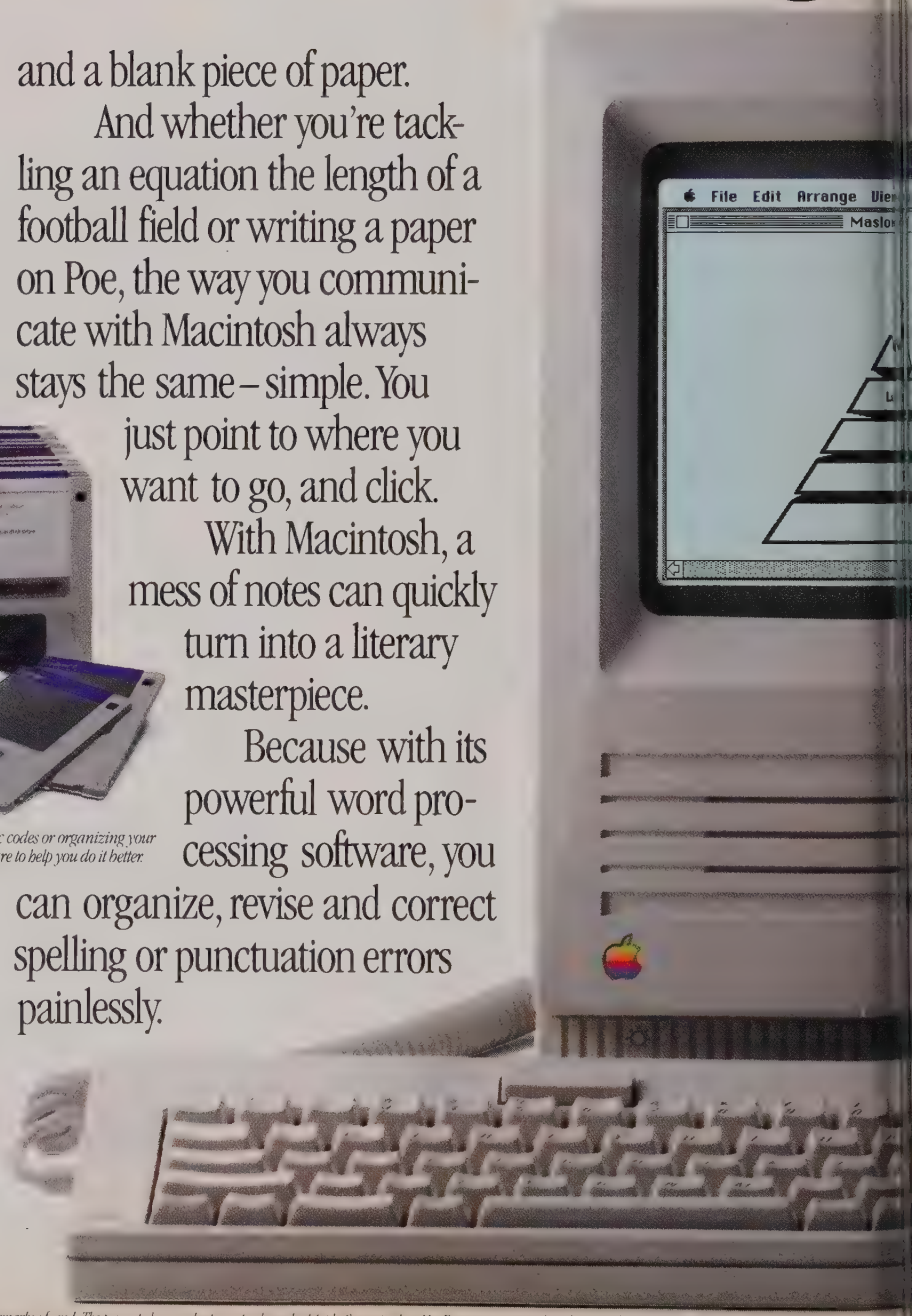

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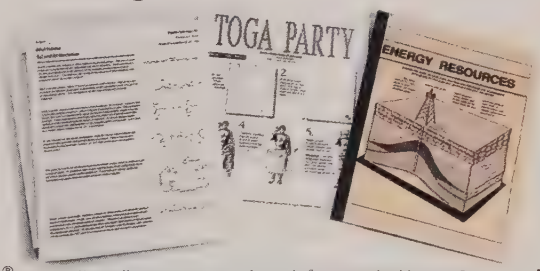

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der the test of time? And how do the new ones look? The investigators' answers fall out of date almost as soon as printed, because new drugs and fresh research reports are coming out so fast. But here are the answers to date:

Chlorpromazine (brand name: Thorazine), first of the ataraxics or tranquilizing drugs used in North America, has clinched its leadership as the one most generally effective in treating the severe mental illnesses that usually need hospitalization. The earlier used, the better. It is best in agitated cases, least effective (and occasionally harmful) in the depressed. After three years of experience with it, doctors are less jittery, though still wary, about undesirable reactions–lowering of blood pressure, damage to the liver or white blood cells.

Reserpine, synthesis of which was announced by Harvard's Professor Robert B. Woodward,* has the advantage over chlorpromazine that large doses can be given to calm acutely disturbed patients. Cincinnati's Dr. Douglas Goldman reports that it often produces turbulence after a few days, which may be mistaken by attendants for a worsening of the illness, but the turbulence is a passing phenomenon. Mississippi's Dr. Veronica Pennington finds that the most enduring tranquilization of state-hospital patients comes from reserpine; its effects persist as long as a month after the last dose has been administered. To cut down the cases of depression caused by reserpine, one manufacturer (Ciba) is combining it with a second drug, Ritalin, designed to give a lift.

Azacyclonol (brand name: Frenquel) is "an exasperating in-and-outer" because different researchers get conflicting results, says Cincinnati's Dr. Howard Fabing. From 49% to 54% of state-hospital patients show good response, says Dr. John T. Ferguson of Traverse City, Mich. He finds Frenquel less potent than the two former drugs in quelling disturbed, overactive behavior, but more effective in squelching a patient's delusions.

Meprobamate (brand names: Miltown, Equanil) effects marked improvement in a somewhat smaller percentage of hospital patients than chlorpromazine or reserpine, but is most popular with the patients, as well as with millions of walkie-talkie neurotics. Noted for its sleep-inducing action and lack of side effects, it also seems to check excessive sweating (which some of the other drugs aggravate).

Besides the front runners, one or another of the research doctors has a good word for nearly all the newer drugs developed in the feverish search for still-more-effective agents:

Mepazine (Pacatal) appears twice as potent as chlorpromazine in tranquilizing effect in a veterans' hospital, reports McGill University's Dr. H. Angus Bowes. In helping to calm long-term patients into subjects for psychotherapy, it is especially effective in combination with chlorpromazine.

Promazine (Sparine), tried at two Illinois state hospitals by Dr. Lester H. Rudy and colleagues, appears to bring about some improvement in a greater proportion of patients than mepazine, but no firm conclusions can be drawn because of the small numbers treated.

Doxylamine, used since 1948 as an antihistaminic under the name Decapryn, is proving remarkable for eliminating unpredictable outbursts of unruly behavior by normally docile patients, reports Michigan's Dr. Ferguson. Like Frenquel, it also reduces delusions and hallucinations, gives a boost to patients who have developed resistance after some improvement on other drugs.

Hydroxyzine, first made in Europe (as Atarax), and designed for the same kind of free-floating, anxious neurotics as meprobamate, has just been put on the market by Chicago's Roerig & Co. Medical reports on effectiveness will be available next week.

* Head of a series of research teams that previously synthesized strychnine, cortisone, lysergic acid and quinine.

Snippets

Short articles and excerpts from TIME's coverage of psychology through the 1950s

February 13, 1950

Television was only beginning to catch on in 1950, but already its supporters and detractors had data on which to base their arguments.

Everybody suspects that television has deeply affected U.S. family habits. To get some specific examples, the Charles Alldredge public relations firm asked questions in 400 Washington, D.C. homes. This week Alldredge reported his findings:

■ Among TV set owners, adult attendance at movies has dropped 72% (from an average of 4.51 times a month to 1.27 times). But children's attendance has declined only 46%.

■ Reading also has suffered. Adults spend 29.1% less time reading books than they did before TV came into the living room, magazine reading is down 22.6%, newspapers 4.7%. Children's reading has fallen off mainly in the comics field–a decline of 15.7%.

■ Sports events have been hit hard. The Washingtonians said that they go to wrestling and boxing matches 44.7% less than before; football 40% less; baseball 36.7% less.

■ Hardest hit of all has been radio, where the Washington TV owners' nightly listening has dropped from an average of 3 hours 42 minutes to a mere 24 minutes. The chief reason given for even occasional radio listening was "the superiority of [its] news programs."

■ But whatever its impact on other leisure habits, TV has been cheering in one respect to sociologists. Said Pollster Alldredge: "Television is keeping families together at home." Specifically, husbands spend 42.8% more of their leisure time at home than they did before; wives 39.7% more; children 41.3% more.

February 13, 1950

The argument here is that one problem with sex crimes is too few people from the general population know and understand the true nature of the "sex fiend." A New Jersey commission tries to help.

Some of the popular convictions which the commissioners would like to correct:

1) *That the sex offender progresses to more serious sex crimes.* Statistics clearly show that "progression from minor to major sex crimes is exceptional."

2) *That dangerous sex criminals are usually repeaters.* Actually, of all serious crime categories, only homicide shows a lower record of repeaters.

3) *That sex offenders are oversexed.* Most of those treated have turned out to be physically undersexed.

4) *That there are "tens of thousands" of homicidal sex fiends abroad in the land.* Only an estimated 5% of convicted sex offenders have committed crimes of violence.

The commission's cool, if not too reassuring report: "Danger of murder by relative or other intimate associate is very much greater than the danger of murder by an unknown sex fiend."

March 13, 1950

Here's a treatment that is not heard much about anymore. The item's

title is "Anesthetizing the Devil."

From the Middle Ages, when sticks were used to "beat the devil" out of mental patients through the middle '30s, when electric and insulin shock therapy began, physical treatment of the insane relied on rude methods. Even now, shock "cures" may be worse than the disease; they often fail to cure, and sometimes the patient breaks a jaw or crushes his backbone in violent, convulsive spasms.

Last week the New York State Department of Mental Hygiene announced that it had developed a gentler way of bringing on the coma which seems to relax sufferers from manic-depressive states. The treatment: intravenous injections of ether.* The ether solution is dripped slowly into the veins (in a technique similar to that used in blood transfusions) for 2½ to 3 hours. The treatment is repeated every day for ten days to a month.

Ether treatments can be given to patients whose physical condition prevents the use of shock. There is no danger of fractures or dislocations, no anxiety, and no sign of unpleasant aftereffects, reported the New York researchers. Of 40 depressive patients treated, 21 recovered enough to be released on convalescent care, ten stayed in the hospital with "marked improvement," and nine were unchanged.

*Given only by inhalation, ether has been used by psychiatrists as a temporary measure to release emotional tension.

June 26, 1950

Some of the articles encountered in TIME in the 1950s may give us pause to wonder how psychology–as a science–survived the decade. This is a section of an article titled "The Cold Women." At the time there was no organized "feminism."

Drs. Kroger and Freed believe that U.S. wives should enjoy sex as much as their husbands do. After serious study of the "psychosomatic aspects" of female coldness, Kroger and Freed view the sexual sensitivity of U.S. women as varying all the way from "complete anesthesia to exquisite receptivity." Convinced that 75% of U.S. women are more or less "sexually anesthetized," the doctors suggest a few basic causes of frigidity:

- Fear of punishment for violations of society's sexual prohibitions.
- Conflicting loves, *e.g.* "love of father as opposed to love of husband, and love of other women as opposed to love of men as represented by the husband."
- Unconscious resentments and hates, such as a "wish for revenge on men . . . or a wish to avenge the mother for all the suffering she went through at the hands of the father."

These and other factors, say Kroger and Freed, account for "aggressive old maids, agitative female 'champions' in constant competition with men, narcissistic women and espousers of virginity."

September 18, 1950

The article, here in its entirety, was published in the EDUCATION section. Remember: this is 1950. The Cold War was never colder. The Army-McCarthy hearings were soon to be THE television event of the decade, finding "pinko-Commies" in all walks of life. That the APA would, at this time in its history, take a political stand of this magnitude is what is most noteworthy here.

The University of California was beginning to feel some unpleasant effects of its year-long battle over the loyalty oath. Last week the American Psychological Association, meeting in convention at Pennsylvania State College, served notice that it was urging its 7,300 members not to take jobs at California. The reason, said the association: by firing six* professors for refusing to say whether they were Communists or not, the university had violated academic freedom.

The association admitted that it might not drop any members who decided to take jobs anyway. "But the rest of us," said an association spokesman,"will feel they are doing a dismal thing."

*Subsequently the number has grown. In their July meeting, the California regents voted to fire six non-signers and, by a narrow vote, retained 39 more. Reversing themselves three weeks ago, the regents voted to dismiss 31 of the 39. Of these, six gave in and signed, 20 others decided to fight it out in court.

September 25, 1950

Have you ever wondered just where William Sheldon got all those photos of nude men and women–front view, back view and profile–that he used in his books that tried to show a relationship between body type and temperament? Apparently getting these photos was not always easy.

The physical examination of freshmen coeds at the University of Washington early last week seemed to be proceeding quite as usual. The girls answered questions, had their blood pressures taken, got weighed, thumped and X-rayed. Then came a procedure that took some of the girls by surprise. One by one, they were ushered into a private room. There, as they stood naked before a camera, a woman attendant took three full-length photographs–front, back, and profile. In the rush, attendants did not have the time to explain to everyone what all the photographing was for.

Later, some girls began to wonder. They told their parents, and the parents began wondering too. Why were the nude pictures taken and what would become of them? By midweek, angry parents had swamped the office of President Raymond B. Allen with protests.

Mays, 1954

President Allen acted with dispatch. He impounded the 852 negatives, locked them up and suspended all photographing . . . Others –with the University of Washington planning to participate this year–turned the pictures over to Psychologist William H. Sheldon, 50, of Columbia University's medical school.

Psychologist Sheldon has never made any mystery of what he was up to: for 25 years he has been studying the relationship, if any, between physique and temperament.

All this long ago won the respect of Sheldon's scientific colleagues. But to protesting parents at the University of Washington, science seemed to be going too far. . . At week's end, Dr. Allen took all 852 negatives to a university furnace room and chucked them into the flames.

October 23, 1950

This article might be classified as an example of "What will they think of next?"

Most psychiatrists hold that the way to treat minor mental ills classified as psychoneuroses* is by mental means alone. The University of Illinois' Dr. Ladislas Joseph Meduna has now published an outspoken dissenting opinion. Psychoneuroses, he declares, are caused by something wrong in the physical working of the brain's nerve cells and can be cured by physical means.

Sniff the Gas. In *Carbon Dioxide Therapy* (Charles C. Thomas; $5), Psychiatrist Meduna claims to have a possible answer: a few sniffs of the gas which puts the bubbles in soda water. This, according to Dr. Meduna, may make psychoanalysis unnecessary. And, he contends, it is won-

derfully effective for anxiety, inferiority complexes and homosexuality, or such psychosomatic complaints as spastic colon, frigidity, impotence and stuttering.

Even at Illinois' College of Medicine, Dr. Meduna's theory and practice are not yet generally accepted. Sniffed Colleague Franz Alexander: "Meduna is merely choking, instead of shocking, his patients back to health." But if Gasman Meduna's theory pans out, Psychoanalyst Alexander may be out of business.

*Not to be confused with psychoses, the more severe mental ills for which shock therapy or brain surgery are often used

November 27, 1950

This article, here in full, is offered as evidence that what may seem eminently reasonable and acceptable in one generation, can soon be found to be totally wrong–no matter how reasonable. Such is the way of science. This piece is titled, "Mice, Men & Mongolism."

Twice in every 1,000 births, some unhappy mother finds that she has borne a child suffering from an affliction which has been misnamed "Mongolian idiocy." In the 85 years since mongolism was defined, authorities have disagreed widely as to its cause. No speculation seemed too absurd. Mongolism, said some, looking at the slanted eyes of its victims, was racial evidence of "the Mongol in our midst." Others, more responsible, argued that it was caused by "advanced maternal age," exhaustion of the womb, ovarian disorders, an upset gland (any gland would do) or, finally, heredity.

Monroe, 1956

Last week, a keen-minded Harvard physician offered the most convincing explanation yet of mongolism. It seems, said Dr. Theodore H. Ingalls at the New York Academy of Medicine, to be the result of an injury or shock to the fetus at about the eighth week of pregnancy. This does not mean that the cause is always the same type of injury or shock. In fact, said Dr. Ingalls, the trouble with researchers who have been looking for a single, simple cause is that they were like the three blind men describing an elephant: one found it all foot, another all trunk, the third all tail.

Eyes, Ears & Nose. All victims of mongolism have three things in common: 1) mental deficiency, 2) short heads, 3) faces which seem to have been flattened (actually, growth is arrested). Besides these constants, other defects are found so often in mongolism that Dr. Ingalls got a vital clue from analyzing them: the ears are usually malformed, there may be opacities in the eye lens, one of the nasal bones is usually absent, and the middle phalanx of the fifth finger is generally stunted. The clue: all these signs affect tissues which develop at about the eighth week of fetal life. In mongolism victims, the body structures formed earlier than that are usually normal, said Dr. Ingalls, and so are those formed later.

"The fetus," suggested Dr. Ingalls in explanation, "has been blighted by what might be called intrauterine drought . . . [It may be] a metabolic drought, a biochemical upset, transient vitamin or enzyme deficiency, or oxygen lack." The likelihood that oxygen shortage may be the villain in many cases is heightened, said Dr. Ingalls, by the fact that mongolism often results from a pregnancy marked by early vaginal bleeding, and this bleeding might starve the fetal brain of oxygen.

Skull, Lip & Palate. To test his theory, Dr. Ingalls and colleagues at Harvard's School of Public Health took 300 mice in batches of 20, subjected them to oxygen lack (artificial "high altitude") for five hours on certain days of their pregnancies. Mice, unlike men, do not suffer from mongolism. But Dr. Ingalls found skull defects (actually worse than mongolism) in about a third of the litters which had been starved of oxygen on the eighth day of development. Lack of oxygen on the twelfth day gave them harelip, on the 14th day, cleft palate.

Even if Dr. Ingalls' challenging theory is proved right, a greater challenge will face doctors and public-health workers in putting the theory into practice and preventing mongolism. Heredity may still be a predisposing factor, he believes, but not a decisive one. And that is the basis for hope. Says Dr. Ingalls: "The important consideration is the prenatal environment. It is man's environment that is susceptible to manipulation, not his genes and chromosomes."

November 12, 1951

The obituary of Martha Freud:

Martha Bernays Freud, 90, widow of the great Viennese psychiatrist; in London. Daughter of a Hamburg merchant, "Frau Professor" was an efficient, workaday wife, provided an orderly household, bore six children (including Psychoanalyst Anna Freud), subordinated her whole life to the professor, who admitted she was not "at ease" with him, or with his work, which she never entirely understood. In World War I, she traded her needlework for *Trabuccos*, the scarce cigars which Freud consumed at the rate of 20 a day. In 1938, to escape Nazi anti-Semitism, the family left Vienna for London, where, the following year, Freud died of cancer.

December 22, 1952

This tidbit is found as a CAPSULE report in the MEDICINE section:

Most of the motorized menaces on U.S. highways do not lack driving skill, but suffer from emotional disturbances, said New York University's Dr. Herbert J. Stack. He recommended psychological treatment for offenders who run through red lights because they hate their jobs or their mothers.

April 20, 1953

The case of Christine Jorgensen was in the news on a regular basis in the early 1950s. This article tells us more about the attitudes of the era than it does about human sexuality.

For a while, having achieved notoriety, she was Manhattan's No. 1 glamour girl. A blonde with a fair leg and a fetching smile, she seemed to be everywhere that was anywhere, with everybody who was anybody. Columnist Leonard Lyons introduced her to a gaggle of celebrities. Broadway Star Yul Brynner and she grinned at each other over a couple of highballs at El Morocco. She appeared in Madison Square Garden at a charity rally sponsored by Walter Winchell, on half a dozen television programs, and was photographed in a soft *tailleur* for the Easter Parade.

Last week came the revelation that Christine Jorgensen was no girl at all, only an altered male.

This was no surprise to U.S. psychiatrists, or to careful readers of Jorgensen's own story in the Hearst newspapers. Jorgensen, a onetime G.I. named George, told how he "was in . . . affections more like a woman than a man"; how two years ago, at 24, he had heard of a doctor in Denmark who might help him live like the woman he wanted to be, how the Danish doctors had diagnosed him as a transvestite,* treated him for a year with female hormones, then operated on him to remove "the evidence of masculinity."

Jorgensen acknowledged in his articles that his organs had been normal in the first place. But many readers jumped

to the conclusion that his was one of the not uncommon cases of pseudohermaphroditism (organs of one sex so malformed or concealed as to be mistaken for those of the other), or one of the rare cases of true hermaphroditism (possessing the gonads of both sexes). In either instance the operations would have left Jorgensen a girl, or a reasonable facsimile thereof.

The New York *Post* put the facts on the line. Reporter Alvin Davis, who flew to Denmark to interview Jorgensen's doctors, established two main points: 1) Jorgensen's case was not one of hermaphroditism or pseudohermaphroditism; 2) in an attempt to accommodate his urge to transvestitism, his Danish doctors had simply amputated penis and testes, left him a male castrate. The disclosure kicked up a storm of discussion around questions of medical practice.

Can transvestites be cured? In relatively mild cases of transvestitism, involving patients who actually want to be normal, U.S. doctors agree that psychiatric treatment, sometimes accompanied by hormones of the patient's own sex, often effect real cures. But in some cases of transvestitism, as in severe cases of homosexuality, cures are exceptional at best. Jorgensen's Danish psychiatrist, Dr. Georg Stuerup, insists that "not one of the major psychotherapists has ever published a satisfactory example of a real, severe case of homosexuality or transvestitism that had been treated successfully."

Can a male transvestite possibly lead a relatively happy life as a "woman"? Absolutely not, say most U.S. psychiatrists. The castration many of them crave may give them the temporary illusion of womanhood, but it can be nothing more than an illusion, and when it disappears, the disappointment and frustration are likely to make their last state worse than their first.

With this the Danish doctors flatly disagree. Jorgensen may well be in for much suffering, they admit, but if so, the publicity given to the operation will be to blame. If Jorgensen had been able to slide quietly into society and be accepted as a woman, the prognosis would be much more favorable.

Is it a mistake to remove the sex glands? It is illegal in every state in the U.S. except in cases of physical disease, though some states have experimented with voluntary emasculation for sex offenders as an alternative to a prison sentence.

Dr. Stuerup, who is in charge of administering his country's program of voluntary emasculation, feels Denmark is effectively treating sex criminals instead of punishing them, points to some statistics: in Denmark only 3.7% of voluntarily castrated sex criminals repeat their crime, as compared to 43% of the uncastrated. He considers the U.S. attitude a childish and hypocritical taboo. "In America," he says, "a surgeon can operate on any organ in the body, including the brain. But no, he may not operate on the testes. That is a hypocrisy which the mature society of Denmark refuses to accept."

How will the Jorgensen case affect the future treatment of transvestites? In Denmark there will be other similar experiments. Two months ago, a closed meeting of leading Danish psychiatrists, surgeons and lawyers approved the procedure that had been followed with Jorgensen. But there will be no such operations in the U.S. (or in Britain, France and many other countries), where the operation is illegal. And the transvestites now clamoring to go to Denmark for the "Jorgensen operation" (Drs. Hamburger and Stuerup have heard from more than 600 so far) are doomed to disappointment. The Danes have decided never to perform it again on a foreigner. Too much excitement.

* Medical definition: one who has a "morbid desire to dress in the clothing of the opposite sex."

May 18, 1953

This CAPSULE report occurs before the very popular book–or the Joanne Woodward film–on "the Three Faces of Eve."

The story of a young mother with a triple personality. Drs. Corbett H. Thigpen and Hervey M. Cleckley of Augusta, Ga., told of a patient whom they called Eve White who had a second personality, "Eve Black," and a third known simply as "Jane." Prim and proper Eve White seemed to be unaware of the existence of Eve Black, but in the Eve Black phase she became coquettish and informal to the point of recklessness. Moreover, Eve Black knew Eve White, and spoke of her in the third person. Sample quote: "When I go out and get a little polluted, she wakes up with a hangover and timidly wonders what in hell's made her so damned sick." Jane suddenly appeared during a psychiatric interview. She knows what both Eves can do, and shows promise of doing better in life than either of them.

February 22, 1954

Of all the work that B.F. Skinner has done, research, writing, theorizing, and so on, none seems to have attracted the imagination of the public quite as much as his modification of an operant chamber for use by human infants. Here is one account. Note also the scathing, footnoted review of *Walden Two*.

A pair of bright-eyed twins named Roy and Ray Hope celebrated their sixth birthday in Bloomington, Ind., this week in the noisy, rambunctious fashion of six-year-olds everywhere. Their father, Henry Hope, head of Indiana University's fine arts department, thought they might be "physically precocious," to which Mrs. Hope retorted: "That sounds like a father talking." Roy and Ray seemed disarmingly normal, and that was news. For they had spent the first 18 months of their lives in a "Skinner baby box."

Devised by Harvard Psychologist Burrhus F. Skinner,* the box is a big incubator with the temperature kept at 88°, humidity at 50%. In it, the Hope twins wore nothing but diapers. The idea was that without confining clothes they could thrash about, play better and grow faster, and that in a controlled atmosphere they would catch fewer colds.

King, 1957

As it turned out, the Hope twins got as many colds as the rest of the family, because they were hauled out of the box many times a day and exposed to adult polluted air. No psychologist can say whether the box helped or harmed them because none has been asked–to their parents it seems obvious that they're doing fine. Mrs. Hope's verdict: the box is a boon to mothers because it cuts down on laundry and bathing.

*Whose *Walden Two* is a depressingly serious prescription for communal regimentation, as though the author had read Aldous Huxley's *Brave New World* and missed the point.

December 31, 1956

The obituary of Lewis Terman:

Dr. Lewis Madison Terman, 79, longtime Stanford University psychologist, who developed the widely used Stanford-Binet IQ test in 1916, followed up his work with a 30-year study of 1,400 California schoolchildren with IQs past the threshold of genius (140-plus); of a cerebral hemorrhage; in Palo Alto, Calif. Tester Terman's findings: his bright children grew up healthier, slightly wealthier and better employed than the average child, but the group contained "no mathematician of truly first rank, no university president . . . gives no promise of contributing any Aristotles, Newtons, Tolstoys . . . In achieving eminence, much depends on chance."

The 1960s

LSD as a treatment; Cold War psychology; stress in Viet Nam; curing homosexuality

Out of this decade of turbulent change an era of progress was born. At its open, Kennedy's Administration put its left foot forward at the Bay of Pigs, and the U.S. awakened to chemical dangers with the birth of thousands of thalidomide babies. The Beatles revolutionized music. Kennedy controlled Khruschev in Cuba. The East Germans sealed off the city with the massive Berlin Wall. America mourned when Martin Luther King was silenced, Bobby Kennedy couldn't hold on, Marilyn Monroe took too much, and Lee Harvey Oswald pulled the trigger in the first televised assassination. Although Cuban missiles had been removed, the Cold War contention mounted as the powers battled on the New Frontier and the troops shipped out for Viet Nam. Students across the country became the patrons of "Alice's Restaurant," and the rebellious spirit of America's youth was manifest in minis and marijuana, *Hair*, riots, sit-ins, and the Sexual Revolution. Women burned bras. Men burned draft cards. Blacks burned ghettos in Cleveland and Chicago. There was little evidence to American solidarity until teenagers filled the fields at Woodstock, a million assembled on Viet Nam Moratorium Day, and all tuned in when Armstrong took a step and a leap on the moon.

EUGENE MIHALESCO

March 28, 1960

Today we think of LSD as a dangerous psychoactive drug. Its use and abuse often lead to a range of symptoms detailed in the revised edition of the *Diagnostic and Statistical Manual of Mental Disorders*. As the 1960s began, many were experimenting with drugs of all sorts; in a variety of ways, the '60s became a decade known for widespread drug use. Early in the decade we find this article detailing the use of LSD in psychotherapy. Note in particular the advice that the psychiatrist "should have had 20 to 40 sessions with it."

Psyche in 3-D. In Hollywood, it was only natural that psychiatric patients undergoing analytic treatment should have visions in wide screen, full color, and observe themselves from cloud nine. What was remarkable was that these phenomena–experienced by (among others) such glossy public personalities as Cary Grant and his third ex-wife, Betsy Drake–were reported in the cold, gray scientific columns of the A.M.A.'s *Archives of General Psychiatry*.

Reason for the many-colored recall of events dating back to the first year of life, and the accelerated recovery of about half the patients, was the use, in combination with orthodox psychotherapy, of one of the most potent drugs known to man: lysergic acid diethylamide. Trade-named Delysid by Sandoz Pharmaceuticals, it is usually known by its early lab designation, LSD-25 (TIME, June 28, 1954 *et seq.*).

LSD first won fame for its power in microscopic doses, to induce hallucinations and a psychotic state–both temporary–roughly parallel to those of schizophrenia. But several psychiatrists on both sides of the Atlantic have sought to turn the drug to advantage in treating real mental illnesses. Now, from the Psychiatric Institute of Beverly Hills, Drs. Arthur L. Chandler and Mortimer A. Hartman report using LSD as a "facilitating agent" in treating 110 patients.

"Treat Thyself." Instead of the normal 50-minute hour on the couch, a patient being "facilitated" by LSD must go through an elaborate routine. First is a screening to exclude the severely depressed, including potential suicides and those adjudged in danger of a severe emotional breakdown (psychosis). Then after four foodless hours, the patients are ensconced on a couch in a

comfortable, carpeted room with classical music piped in. After the tasteless shot of as little as a millionth of an ounce of LSD in water, they lie down and are fitted with blinders (a "sleep shield"). To make sure that they shut out external stimuli, some also wear wax and cotton earplugs.

The drug's effects begin to show within 15 minutes to two hours: a single LSD-psychotherapy session may last five to six hours. Half an hour before it ends, the doctors give an antagonist drug (usually secobarbital or chlorpromazine) to cut short LSD's lingering effects: they make sure that the patient does not drive home, and they often prescribe sedatives for the next couple of days.

Even with these safeguards, say Drs. Chandler and Hartman, LSD treatment can still be dangerous unless the psychiatrist has had plenty of it himself. It is not enough for him to have taken it once or twice "to see what it's like": they insist that the psychiatrist should have had 20 to 40 sessions with it.

While the drug takes effect, they report the patient may show a variety of physical reactions, twisting, trembling, posturing, wringing his hands, laughing, crying, or curling up in the fetal position. He may feel unnaturally hot or cold, unduly sensitive to sound, tingling or numb, sexually aroused–or in severe pain. The pain, they believe, is often associated with the repressed memory of some injurious childhood experience, so it is an important factor in the psychotherapy.

God & the Devil. As the drug's effect deepens,* the patient has illusions–not hallucinations, the doctors insist, because they does not believe in them. Instead of "hearing voices," as in schizophrenia, he enjoys visions. These visions may be timeless and seemingly unrelated to past or present experience. But often they consist of incredibly vivid, colorful scenes from the recent past or from a childhood remembered with superhuman accuracy: "Some patients describe it by saying that it is as though a 3-D tape were being run off in the visual field." Long-forgotten childhood fantasies may be mixed with real memories, some going back (as patients testify that their parents have confirmed) to life's first year.

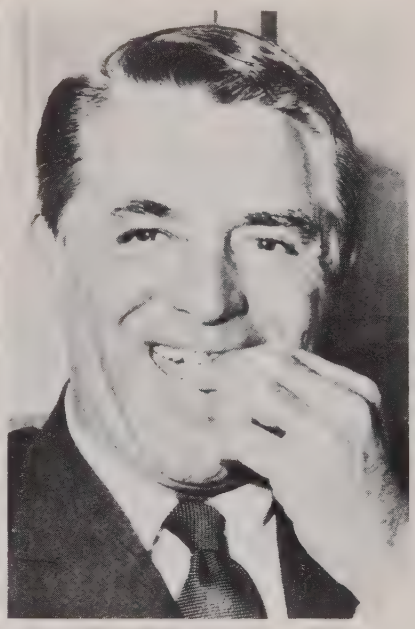
Family conflicts may be projected onto the LSD screen in puppet shows acted out by Disney characters. Symbolic of emotional disturbance are dragons, witches, fairies and satyrs. There may be fantasies of seeing God and the Devil "locked in mortal cosmic combat."

Whatever the visions' content, most important is the fact that the patient seems able to stand aside and report vividly observed conflicts, dredged from his deepest unconscious and acted out before him. Somehow, his sharpened insight is able to function independently of his emotions. The more he "goes with the drug," the more he can stand aside and "see himself" as he has been, resisting reality and rationalizing his behavior. He learns that "in the world of psychic reality a great many things . . . have no correspondence to facts in the objective world. [But] these psychic realities . . . may be the very ones which when repressed give him trouble in his dealings with the objective world."

Addicts' Insights. Who benefits from LSD plus psychotherapy? Drs. Chandler and Hartman had 44 neurotics, 25 cases of personality disorder (including schizoid, paranoid, and eight patients with extreme compulsiveness), and 17 who had been addicted to alcohol or narcotics or both. Most of the patients took LSD dozens of times in stepped-up doses. (There appears to be no danger of addiction.) No fewer than 50 of their patients, the doctors report, showed considerable to outstanding improvement while 38 more showed at least some improvement. Only 22 were rated as having shown no benefit. Most gratifying was the success with victims of notoriously resistant types of illness–addicts and obsessive-compulsives.

LSD is still an investigational drug (not available for general prescription), its distribution closely controlled by law, and watchdogged by Sandoz. Like a score of other physicians doing research on LSD, Drs. Chandler and Hartman emphasize that by itself it cures nothing. Its apparent value lies in boosting–and accelerating–the benefits to be gained from orthodox psychiatry. One of their patients made a good recovery in less than a year after six years of drugless couch work had failed.

In the East, Manhattan's Dr. Harold A. Abramson has pioneered with LSD in group experiments. In Saskatoon, Sask., and at New Westminster, B.C., Dr. Abram Hoffer has used it determinedly on alcoholics, has found that while it is no chemical cure, the heightened insight that it gives enables patients to see the emotional basis of their problem drinking. Whereas Alcoholics Anonymous usually claims success in only 50%-60% of run-of-the-mill cases. Dr. Hoffer has dried out 50% of the 100-proof cases who had been failures in A.A.



Patient Cary Grant

In Hollywood, word of LSD's powers inevitably circulated with the martinis, led to a fad to try it. An osteopathic psychiatrist gave it experimentally to a number of the curious, including famed Novelist Mystic Aldous (*The Doors of Perception*) Huxley. Among the Chandler-Hartman patients were several movie notables whom the doctors refused, because of professional ethics, to name. But some named themselves. One of these was durable Actor Grant, 56, who emerged from therapy to give a confused account of what had ailed him during a long and successful career, but he was convinced that he had at last found "a tough inner core of strength."

* Paradoxically, notes Boston's Dr. Max Rinkel, in mice (and presumably in man) LSD concentrates less in the brain than in any other major organ and is far below its highest brain concentration when the psychological effects are greatest. So how it works is a mystery.

February 8, 1963

By the 1960s, psychotherapy and psychiatry were gaining wider acceptance among the general population, to the point of putting a strain on available care-givers. The conference reported on in this article proposed a partial solution, and proposed it well: use group therapy techniques.

Strength in Numbers. If all the 15,000 M.D.s in the U.S. who are psychiatrists, plus all the psychiatric social workers and all the psychologists trained as therapists, spent all their working hours with individual patients, they would still be able to treat only one in ten of the Americans who need help for emotional ills. For both psychiatry and nonmedical therapy (especially analytic forms) traditionally work on a one-to-one basis, with the reassurance that it's all confidential.

The 750 members of the American Group Psychotherapy Association who met a fortnight ago in Washington exchanged reports on a diametrically opposed theory: that for many patients, in many circumstances, treatment in groups is better than solo

therapy. In most cases, it is at least better than no treatment at all.

Ready-made Group. Perhaps because Americans are notorious joiners, group psychotherapy is the most distinctively American contribution to treatment of the mentally ill. The system had a false dawn as far back as 1905, when a tuberculosis specialist found that his patients benefited from regular meetings. But the emotional aspects of TB were not then understood, and a quarter-century passed before a few pioneers began to reason that some people get sick from their reactions to other people, and that when they get better they still have to live with other people. In the meantime, said the theorists, why not treat the patients along with other people?

One of the natural areas for group therapy is juvenile misbehavior or delinquency. A psychiatric social worker told the Washington meeting how his service, on the frayed edge of New York City, had handled a group of boys, aged 13 to 15, who were doing poorly in school and heading into trouble. The boys insisted on being treated together. They showed up in flashy clothes, laughing too loudly in the hope of appearing casual, and tensely chain-smoking. They ridiculed the therapist for wearing "square" clothes and not being hip. They complained of being persecuted by parents and police. When sex was discussed, the therapist found that the boys were utterly ignorant of the subject, and, despite their bravado, they were all virgins. The group sessions on sex became tense, often punctuated by uncontrollable laughter used to cover up doubts and fears. Within a year, though, the boys toned down in both dress and behavior. The self-constituted group, the therapists decided, had been ready-made for treatment.

BEN MARTIN

Spotnitz conducting psychotherapy group

Emotional misery loves company.

For 20 older and definitely delinquent youths, New York State set up a special center at Middletown. It was no plush country cottage, and the regimen was deliberately kept rugged to make sure the boys would not get too relaxed or get to like it. They met five times a week in groups of ten. "It became almost a matter of course," reported Dr. Girard H. Franklin, "for them to discuss a mother's prostitution, a father's failures, their own homosexual fantasies or experiences. Their ability to accept and understand these highly anxiety-producing phenomena was greatly aided by their being able to share their experiences, and their insights into them with each other."

So far, of 29 delinquents who have completed the treatment, only two have been haled into court again. And START (Short-Term Adolescent Resident Training) programs are being extended to seven more centers in the state.

Husband *v.* Wife. Many different types of people fit readily into group therapy if they have at least one major problem in common. One of the first and clearest examples of the method's value was in the treatment of World War II victims of combat fatigue or "war neurosis." Since these reactions could be traced ultimately to fear, shame and guilt, the soldiers who could see and talk with others in the same plight got better more quickly. Obese patients get mutual support from other fatties and bolster one another's will power. At a Brooklyn home for the aged, patients thought to be hopelessly senile are showing new talents after group sessions, and a few feel such a quickening of youth that they want to get married.

Couples already married but about to break up are more of a problem. Dr. Philip R. Hastings of Iowa's Black Hawk County Mental Health Center worked with four couples who spent most of their weekly sessions for the first few months arguing among themselves. Three of the wives kept assailing their husbands with accusations but would not let them get in a word of answer. It was just like home. But in couple No. 4, the husband was the verbal aggressor, and eventually the group turned on him. Gradually, the long-hidden, unconscious bases of marital difficulties were brought out in the open and discussed. Sometimes the patients vented their hostility on the therapist. In almost all cases, the husbands and wives also had private, individual therapy as well. But their ability to benefit from this, said Dr. Hastings, was largely the result of the group therapy.

Group psychotherapy is booming, and Manhattan Analyst Hyman Spotnitz calls it the "Third Psychiatric Revolution"–after the unshackling of mental patients around 1800 and the Freudian revolution a century later. But nobody at the Washington conference offered the technique as a total answer to mental health problems. In unofficial self-analysis within their own group, some of the therapists pointed to the danger that the group movement may become an uncontrolled fad.

But before that can happen it seems certain to pay off. Simply by enabling a therapist to deal with several patients at once, the group system reduces the number who must go untreated. And it cuts costs from an average of $20 a session for a psychiatrist or psychologist in private practice to as little as 50¢ for the needy and $4 or $5 for those of middle income.

February 14, 1964

The following article was written nearly a quarter-century ago. It summarizes what was then known–or suspected–about sleep and dreaming. It centers on the pioneering work of Nathaniel Kleitman and William Dement. Much of it reads like a modern textbook.

Not poppy nor mandragora,
Nor all the drowsy syrups of the world,
Shall ever medicine thee to that sweet sleep . . .
–Othello

Mens Sana in Corpore Sano. The man who now carries to bed with him the world's heaviest burden of responsibilities, Lyndon Baines Johnson, needs no drowsy syrups to help him get to sleep–and he often gets only five hours a night. Adman David Ogilvy takes a nightly dose of "a little yellow sleeping pill" which, his doctor assures him, is not habit-forming, and he falls asleep easily on his right side. Actress Julie Harris finds that a long run in an exacting role makes it progressively harder to sleep, sometimes reads aloud to herself for half an hour or more, then falls fast asleep with the lights on. World Heavyweight Champion Sonny Liston sleeps as singlemindedly as he fights, but in a different posture: usually on his back, says his wife. "I leave him there unless he starts snoring. Then I make him turn

over on his side."

No Wolf or Owl. Though it has always been as natural and universal as eating and drinking, in recent years sleeping has become one of the most talked-of and sought-after boons of life. For many people it seems to be one of the most elusive. From breakfast to bedtime, modern man echoes a recurrent complaint: "It's so much harder to get to sleep, and to stay asleep, than it was in the old days." There is indeed much more to stay awake for. Electricity makes it possible to read through half the night without straining the eyes and without getting up to trim a wick. The same electricity brings in round-the-clock radio programs, while TV competes to make the late show later.

When he finally does go to bed and tries to sleep, the city dweller has to contend with the incessant noises. Suburbanites are not much better off, and the remotest home on the range may lie under the path of roaring jet airliners–the same swift giants that carry a man halfway around the world in half a day, and throw his built-in waking-and-sleeping clock out of kilter.

No such noises shattered the sleep of the pioneers a century or more ago. But the tire screech of a hard-braked automobile is probably no more disturbing than the howl of a timber wolf rallying the pack. And no American today need lie awake worrying whether the soft fluting of a small owl is really the signal that a band of Indians is closing in for a scalping spree.

If the enemies of sleep have changed more in kind than in quantity, it still seems fairly certain that modern man sleeps less than his ancestors did. Some reasons are clear: generations ago, men did a great deal more physical work; they got plain tired, or downright bone-weary. And before Mr. Edison's electric bulb turned night into a gaudy imitation of day, it was hard on the eyes to read, write or sew after dark.

What Is Normal? Whatever the problems, sleep and slumber, dreams and dreaming have fascinated man ever since he evolved the wits to think about them. But not until the 20th century did truly scientific medical research get rolling. The results are summarized in a scholarly monograph, *Sleep and Wakefulness*, by Dr. Nathaniel Kleitman (University of Chicago Press; $12.50). Dr. Kleitman lists no fewer than 4,337 learned publications on sleep, but he winds up with the sobering conclusion that, even today, nobody can define the condition. The basic question remains unanswered: Is wakefulness the more natural and fundamental state, in which sleep is only a restorative interlude, or is sleep the truly normal condition?

From his eminence as the grand old sandman of science, Dr. Kleitman dismisses the popular theory that man has a "sleep center" in his brain that must be activated to lull him out of his normal wakefulness and into sleep. "The principal, if not the only mechanism involved," he says, "is a center or system whose activity induces and maintains wakefulness and whose inactivity leads to sleep."

Muscle Fatigue. What does it take to make the wakefulness center fall asleep? Aristotle noted that a heavy meal leads to somnolence, went on to speculate that sleep is caused by vapors rising from the stomach. Physicians have attributed falling asleep to temperature changes in different parts of the body. Neurologists have found complex explanations in various nerve bundles. Pavlov, who became famous by getting a dog to drool at the sound of a dinner bell, invented a theory of cortical inhibition.

Nonsense, says Dr. Kleitman: man goes to sleep when his muscles are so tired that they have to relax, though this is complicated by the tensing effects of emotions on muscles. The mere act of lying down leads to eventual relaxation of all but two muscle groups–the sphincters that remain contracted to keep the sleeper from soiling his bed. Muscular relaxation leads, by some mechanism that no one yet understands, to relaxation of the wakefulness center. In the process, the temperature of the body drops about one degree. No man can lull himself to sleep, however, simply by cooling down his bedroom. His own internal thermostat will fight back. Not only will the discomfort of being chilled tend to keep him awake; it will make him shiver, and shivering speeds up the body's metabolism, which also heightens wakefulness.

Stored Energy. During sleep, the heart slows down from an average of 75 to 60 beats a minute. Breathing slows down, from an average 16 to 12 respirations a minute. Blood pressure falls. Sweating increases. The liver stores up glycogen ("animal starch") that will be needed during the day for conversion into blood sugar that is in turn converted into energy. The kidneys go on working, endlessly filtering metabolic poisons out of the blood, but because the sleeper has no water intake, his first morning urine is more concentrated and darker than during the day.

Sleep has no direct physiological effect on the brain. Because the brain has muscles, it does not get tired. What passes for "brain fatigue" is actually a combination of muscle fatigue and emotional factors, such as anxiety, boredom, or the hypnotic effects of a monotonously repeated task. The muscular and emotional components of sleepiness and wakefulness are almost impossible to sort out. Even the seemingly simple closing of the eyelids has a complex explanation: the eye muscles get tired (so that, in extreme fatigue, focusing becomes impossible), and the cornea must be kept bathed in fluid and protected from dust. Just lying down, with eyes open but with muscles relaxed, has some refreshing and restorative effect. Lying down with eyes closed, to shut out distracting movements, is a bit better. Getting so relaxed as to be half asleep, half awake, beginning to have dreamlike fantasies, is better yet. The last best help to man is sleep itself.

Warm Milk. By whatever mechanism, sleep is the great refresher, or as Shakespeare had it, "Sore labour's bath /Balm of hurt minds." The important thing is to fall asleep at the time of one's choosing. Responsible physicians doubt that there are any universal passports for a quick trip to nirvana.

The one inviolable rule is: relax–which, of course, is easier said than done. Even the most tightly wound-up businessman can usually do so after 36 holes of golf because his tired muscles do his relaxing for him. But on his workaday routine he may use no more muscle power than it takes to walk to his car. At day's end his muscles are tense, not tired.

The before-dinner drink is a good relaxant, because alcohol depresses nerve cells in the brain, and these help the muscles to relax in their turn. A heavy dinner too late at night, topped by too much liquor, may soon induce a stuporous sleep, but this is likely to be interrupted by hydrostatic pressure in the bladder. At the other extreme, going to bed hungry results in stomach contractions, which keep most people awake. There is much to be said, both physiologically and even psychoanalytically, for Grandma's prescription of a glass of hot milk at bedtime. And for those who feel they have outgrown plain milk, there are soothing substitutes: Ovaltine, Sanka, cocoa or hot buttered rum.

Many men insist that they must have an alcoholic nightcap, but more and more have learned to pass up brandy after dinner, explaining: "It keeps me awake." If, in its place, they take vodka (a mixture of almost pure alcohol and water), they are on the right track. Scotch whisky and gin in moderate amounts are also unlikely to interfere with sleep. The trouble with brandy, bourbon and rye is that, compared with vodka, most brands contain 20 to 30 times as much of the ingredients known to liquor chemists as "congeners." Some of these are the aromatics that give the liquors their characteristic odor, taste and color. Others are chemically different kinds of alcohol, including fusel oil. Even in minute amounts, these congeners keep some people awake.

Caffeine, whether in coffee, tea or APC tablets (aspirin, phenacetin, caffeine), taken for a cold, definitely has a stimulating and sleep-postponing effect on a majority of people. But there

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is a substantial minority on whom, laboratory tests show, it has no effect at all. There are even a few people whom it puts to sleep.

Relax & Enjoy It. Short of the outright sleeping pills, which doctors call hypnotics, there are many drugs that help to bring on sleep, but these also affect different people in different ways. Ironically, some of the best-known pep pills put some people to sleep. Many of the antihistamines, intended to relieve allergies, are also prescribed as soporifics. Virtually all the tranquilizers tend to make falling asleep easier, but their mechanisms vary.

Though sleeplessness, usually dignified by its Latin (and medical) name, insomnia, is now an even commoner complaint than the common cold, few doctors recognize it as a disorder. Lack of sleep, they say, is self-curing, and no one ever died of it. The complaint, "I tossed and turned all night and didn't sleep a wink," is a myth. (Dr. Kleitman has heard it from a man who had just been observed sleeping soundly for seven hours.) The most that these hard-headed doctors will concede is that anxiety about not getting sleep is itself upsetting, and they will prescribe just a few hypnotics to break a vicious cycle. But most doctors prescribe sleeping pills as freely as aspirin.

De Martelly's "No More Mowing"

Vapored, stupefied or just plain tired?

Shakespeare's poppy is still around in the form of morphine and its derivatives, plus synthetic substitutes. Mandragora is gone. But the drowsy syrups, and more recently tablets and capsules, have multiplied enormously. By far the most abundantly used and misused are the barbiturates. They come under a hundred names. New, synthetic hypnotics are claimed by their makers to be safer and in some cases surer.

Many doctors doubt these extravagant claims, but the sleep-pill business is booming. The number of prescriptions written for barbiturates is meaningless–too many prescriptions are renewed, in defiance of doctors' orders and federal and state laws, and many prescriptions are forged. Americans spend an estimated $60 million a year, legally or not, on prescription-type sleeping pills. Another $17 million goes for over-the-counter items which, by federal law, must contain none of the potent opiates or barbiturates. After the harried insomniac has spent a few hours in drug-induced sleep, he is likely to wake up heavy-lidded, furry-tongued, with the feeling known as barbiturate hangover. Then he may turn to pep-up pills as an antidote.

Insomniacs who shy away from pills have created a new industry. They can spend up to $480 for a hospital-type bed that cranks up at head and knees, down at the buttocks and feet. For $69.95 they get a gadget, the size of a table radio, that makes white noise–"a scientific blend of all sounds"–to drown out intruding racket. Other machines swish like the restless sea, or, in midwinter, hum like summer's air conditioner. There is a whole catalogue of earplugs, His and Her reading lights, even a togetherness cigarette holder so that two can smoke in bed.

Not Like a Log. There is no single best position for falling asleep, though the *Encyclopaedia Britannica* says all humankind adopts an approximately horizontal position. This is in contrast with birds, which sleep standing on one leg, with beak tucked under wing. Most people sleep on their sides, spending more time on one than the other, and tend to bend the hips and draw up the knees a little, the better to relax. Sleeping supine is likely to cause snoring, which may wake the sleeper himself, besides disturbing others.

Though many people claim that once they fall asleep they don't move, Dr. Kleitman is emphatic: "No normal person sleeps 'like a log.'" Anyone gets uncomfortable from staying in one position while asleep just as he would while awake. To check this, his University of Chicago researchers rigged up Rube Goldberg devices to bedsprings and got electrical recordings of sleepers' tossing and turning. The average: 20 to 60 major movements during a night's sleep.

Most people will settle gladly for a few hours a night. But how many are really necessary? For centuries there have been six-, seven- and eight-hour schools. Healthy men with strong digestions, Robert Burton held, need less sleep than those with weak stomachs; sanguine and choleric men need less than the phlegmatic, and the melancholic need most of all. Thomas Edison claimed that a man needed only four or five hours of sleep a night–but he also took daytime naps. Among volunteers in scientific studies, the natural sleeping time has ranged from about six to more than nine hours, with an average of 7 1/2.

No Instant Dream. However long they sleep, many men and women have difficulty staying asleep for the desired number of hours. Mothers get the habit of sleeping "with one ear open," afraid they may miss a high-pitched cry from a child's bedroom. Men in their 40s and over are more likely to be waked by bladder pressure.

Though it has not yet been proved, it seems likely that most predawn awakenings result from dreaming. The tensions of the day that a man carries to bed with him may be damped by a nightcap or pill, only to be reactivated by dreams after the first couple of hours, when sleep is deepest. It is in the study and explanation of dreaming that sleep scientists have recently made their most dramatic progress.

The stuff that has been written about dreams would fill a library, and most of it makes as much sense as "such stuff as dreams are made on." Dr. Kleitman's Chicago team determined to collect accurate data. Such brilliant students as Dr. William Dement (now at Stanford University) and Dr. Edward Wolpert (now at Chicago's Michael Reese Hospital) stuck a tiny electrode on each side of a volunteer's eye and carried the leads to a brain-wave machine (electroencephalograph) in the next room.

The waves of the EEG showed when the sleeper's eyes were moving. Slow eye movements, taking three to four seconds, occurred when the sleeper was moving the position of the body. But rapid, almost flickering eye movements, now abbreviated in the trade jargon to REMS, occurred in varying stretches of five min-

utes to an hour, several times during a night's sleep. By waking and questioning their subjects after a REM period, the researchers found that they nearly always recalled having just finished a dream. By checking their EEG tracings with what their subjects told them, the Chicago researchers learned that:

- Most people dream four or five times a night.
- Dreams may last a few minutes to an hour, but average 20 minutes.
- Events in a dream happen about as fast as corresponding events in reality.
- Occasionally a sleeper has a series of related dreams, like soap-opera installments, and sometimes a common thread runs through two or more dreams like a leitmotiv.
- Outside events, such as the noise of opening and closing doors, are rarely incorporated in the dreamer's libretto.

Guardian of What? Though such facts have been established, the basic question remains: Why does anybody dream at all? Kant and Schopenhauer equated dreams with insanity. Freud called dreaming "the guardian of sleep"; he concluded that the sleeper dreams of problems (often heavily disguised) that boil up in his unconscious because they are too painful or threatening for the conscious mind to face. The dream, he said, preserves sleep by offering a palliative for the problem.

Dr. Dement devised an ingenious experiment to find out what happens if a person is allowed to sleep his normal number of hours, but is not allowed to dream. His volunteers were awakened whenever their REMs indicated the beginning of a dream. Then they were allowed to fall asleep again. And so on, night after night. By the third night, most volunteers began to get edgy and act strange. In the final part of the experiment, when they were allowed to sleep as long as they wanted, they dreamed twice as much as usual.

Dr. Dement concluded that dreaming may be even more than the guardian of sleep: it may be the guardian of sanity itself, as sleep is the guardian of general health.

April 24, 1964

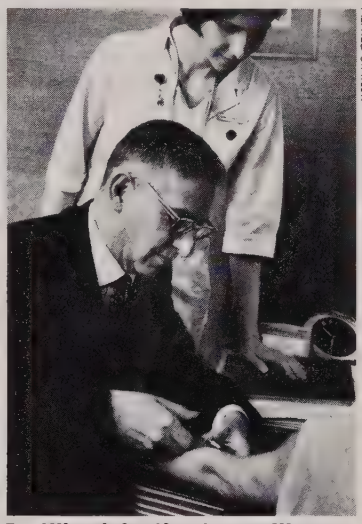
There have been few scientific revolutions any more significant than the introduction of drugs for the treatment of the mentally ill. That revolution was in its early stages when the following was written.

What Tranquilizers Have Done. Little more than ten years has passed since two psychiatrists first gave North American patients the new drugs that were soon to be widely known as tranquilizers. In so doing, they started the most dramatic and hopeful revolution in the long, dolorous history of mental illness. They are still at it. Berlin-born Dr. Heinz Edgar Lehmann, who introduced chlorpromazine at Verdun Protestant Hospital outside Montreal, is barnstorming at meetings called to find ways of developing still more and better drugs. New York's Dr. Nathan S. Kline, who introduced reserpine at Rockland State Hospital, is in Iran, fomenting a psychiatric revolution there. Just before he left the U.S., Dr. Kline told the New York Academy of Medicine what has been wrought in these ten years. It is impressive indeed.

Savings in Billions. Most notable, of course, has been the reversal of a once seemingly inevitable annual increase in the number of mental patients. If their numbers had continued to mount since 1956–when use of the drugs became widespread and fairly systematic–at the same rate as in the pre-drug years, there would now be 82,000 more patients confined in mental hospitals. "Instead," said Dr. Kline, "there has been an actual decrease of 54,000 patients, giving a difference of 136,000 persons." The care of these might-have-been patients over eight years would have cost more than $1 billion. Dr. Kline estimates: building hospitals to house the newcomers would have cost $2 billion more. Alongside such figures, the cost of the drugs and of drug research is "very modest indeed."

Anybody admitted to a mental hospital today has twice as good a chance of getting out as he would have had before the drugs. Therefore, said Dr. Kline: "Public-mental-hospital patients now come with an expectation of improvement, and they come earlier–when treatment is more apt to be successful."

Accepted as Illness. The drug revolution, said Dr. Kline, has opened up broad new avenues for the treatment of many patients formerly considered untreatable. Most important, perhaps, "it has begun to change centuries-old public attitudes toward mental disease."



ALFRED STATLER

Dr. Kline injecting tranquilizer

Fewer patients, more cures.

Dr. Kline pointed out that today there is much "greater acceptance of patients back into the community, since psychiatric disorders are now much more looked upon as illnesses, and as illnesses that can be treated. The fact that a condition is treated with medication somehow guarantees, in the public mind, that it is a genuine illness." One measure of this change is that one-third (by his estimate) of all packages passing across druggists' prescription counters today are for drugs that influence the mind.

Drug treatment, Dr. Kline said, constitutes direct action on many patients for whom all other methods of treatment have failed. True, many patients nowadays are further benefited by other methods, but the important thing is that they would not have responded at all to any treatment without the drugs. "Disturbed behavior is reduced so that the staff is able to concentrate on those who will benefit, rather than, as in the past, having to spend almost all its time managing assaultive patients. And there is now more personnel available because the work is no longer so hazardous or distasteful." The family physician, said Dr. Kline, should take much more responsibility for treating depression ("far and away the most common of the emotional disorders") and refer only the stubborn cases to psychiatrists.

Problems from Solutions. Dr. Kline attacked the common misconception that the neuroses are "less severe" than the psychoses. "Both the diagnosis and treatment of the psychotic are simpler and more effective than those of the neurotic patient," he said. "With adequate drug treatment, plus a few basic psychiatric skills, the family physician would be able to handle the bulk of psychiatric patients and thereby free the psychiatrist to work with the more difficult disorders–such as neurosis."

So little is known about how the drugs work that selecting the right one for a particular patient often takes precious time. And although there seem to be so many drugs, there are really not enough. "New drugs are badly needed to treat conditions which are not yet treatable. These include mental deficiency, diseases of aging, certain types of juvenile delinquency, and psychopathic personality." Even without these, psychiatric services must be reorganized to take full advantage of what the drugs have made possible. "There is nothing more productive of problems," Dr.

Kline concluded, "than a really good solution."

July 18, 1969

The subject of "bystander apathy" became grist for the mill of the popular press after Kitty Genovese was killed in full view of 38 of her neighbors who did not intervene on her behalf. That killing occurred in New York City in 1964. This article on bystander behavior appeared 5 years later.

Why People Don't Help. It was a hard murder to forget. Thirty-eight people passively watched as a man stalked, stabbed and killed Kitty Genovese, 28, in the predawn darkness of the Kew Gardens section of New York City five years ago. All heard her screams: none came to her aid. Since then, the paralysis of the innocent bystander has spurred psychologists to investigate man's unfortunate proclivity for playing the Bad Samaritan.

Why do people fail to help their fellow man? Fear, apathy and indifference are not quite the answer. Instead, the scientists' experiments show that the average citizen's instinctive concern for his fellow human beings is too often restrained by a taut, subtle web of social pressures. Particularly in groups and crowds, write John M. Darley of Princeton and Bibb Latané of Ohio State in a recent and already classic report, "until someone acts, no one acts."

Seeping Smoke. Even the act of seeing an emergency is surprisingly difficult. Darley and Latané point out, "Americans consider it bad manners to look too closely at other people in public," the scientists write, "and are embarrassed if caught doing otherwise." What people do see is often ambiguous. Smoke seeping from a building may mean a fire or a broken steam pipe; a man sprawling in a doorway may be having a heart attack, or may be just sleeping off a bender. In trying to decide whether a situation is critical, the researchers say, "a person often looks at those around him to see how he should react himself. In general, it is considered embarrassing to look overtly concerned, to seem flustered, to 'lose your cool.' A crowd can thus force inaction on its members by implying, through its passivity and apparent indifference, that an event is not an emergency."

In one experiment conducted by Latané and another colleague, college students in a waiting room heard a tape recording that simulated the sounds of a woman climbing onto a chair to reach a stack of papers. She fell, injured her ankle, and began to moan, "Oh my God–my foot! I . . . can't get this thing off me." Seventy percent of the people who were waiting by themselves offered help; with another person in the waiting room, only 20% showed their concern.

Even without group pressure, notes Stanford Psychologist Philip Zimbardo, people will rarely intervene in an interfamily situation for fear of violating a social code. Husbands and wives can literally beat each other to death before most outsiders will step in. Recent studies of the estimated more than 30,000 "battered children" injured by parental abuse every year indicate that as many as 4,000,000 people were familiar with at least one such case of family violence and that most of them did nothing.

Helping others is not encouraged by law, as many people are aware. In most states, good samaritans who intervene can be sued for their trouble and must bear the cost of any injuries they may suffer. Helpers weighing the possible risks of intervening are also concerned about losing their freedom, says University of Wisconsin Psychologist Leonard Berkowitz. When one person helps another, says Berkowitz, the helper almost inevitably feels that he has come under the sway of the person whom he is assisting.

What kind of a man surmounts these constraints? One rather circular answer is a man who sees someone else do it. Northwestern University's James H. Bryan discovered that the proportion of people who stopped to aid a woman driver struggling with a flat tire increased if they passed another woman farther back who was already getting help. Columbia Teachers College Psychologist Harvey Hornstein has experimentally "lost" 500 wallets around New York City during the past two years. His studies show that finders who think that others have been

CATHERINE URSILLO–NANCY PALMER

Manhattan workman ignoring mugging

Unfortunate proclivity for playing the Bad Samaritan.

helpful in similar situations are more likely to mail the wallet back.

The nature of altruism itself is the topic of increasingly sophisticated research. Eventually, they may reveal how more people can be encouraged to leave the crowd and take the crucial first step. Meanwhile, Latané and Darley contend that being aware of these antisocial pressures is the first step toward resisting them. Thus prepared, they contend, "we can choose to see distress and step forward to relieve it."

December 12, 1969

For many people, "Child Psychology" and "Jean Piaget" are inseparable associations. Piaget was becoming most popular in the late 1960s when the following article was written.

Jean Piaget: Mapping the Growing Mind. It is late afternoon, but the four-year-old insists: "It can't be. I haven't had my nap." Such is the mind of the child, by most indications illogical and full of nonsense. Not so, says Jean Piaget, a grumpy, mountain-climbing Swiss philosopher who is also one of the world's foremost child psychologists. Few researchers have so meticulously or provocatively mapped that terra incognita, the mental world of children. For 50 years, Piaget, now 73, has been discovering through deceptively simple experiments that children actually have surprisingly intricate thinking skills that adults should learn to appreciate and understand better than they do.

Piaget was little heeded in the U.S. during the 1940s and early '50s. Not all of his 30 obstruse books and myriad articles had yet been translated from their original French and, says one child psychologist, "we ignored him because we were so busy with Freud." Piaget's current acceptance is a clear sign of how the

preoccupation with orthodox Freudian concerns is broadening to other areas (TIME, March 7). A flood of Piaget translations and explications has appeared.* Piaget-oriented researchers are expanding and following up his leads, and his insights are in growing vogue among U.S. educators, psychologists and some parents. The most enthusiastic compare his work in significance to Freud's pioneering exploration of the emotions. What many people find so appealing about Piaget, as Harvard Psychiatrist Robert Coles points out, is that in contrast to psychoanalytically oriented researchers, he emphasizes "man the developing thinker rather than man the universal neurotic."

Dreams That Fly. As Freud found that slips of the tongue are keys to the unconscious, Piaget finds that the mental "mistakes" children make are clues to intellectual processes that are really precursors of grown-up thinking. An infant, for example, initially may suck at almost anything that comes near his mouth; soon, when he is hungry, he learns to persevere only when his lips close over a nipple. The reflex-driven gropings by which he learns to recognize the nipple and distinguish it from a rattle, as Piaget sees it, are a first use of trial-and-error logic. Piaget considers this learning process of infancy one phase in the first of four distinct but sometimes overlapping stages. The other stages: ages two to seven, seven to eleven, and eleven to 15.

During the second stage, the child thinks about everything in terms of his own activities; he believes that the moon follows him around, or that dreams fly in through his window when he goes to bed. Erroneous though these ideas are, they help the child comprehend that actions have causes. In this period, the child is not egocentric by choice. Parents should understand, says the University of Rochester's David Elkind, a leading Piaget scholar, that intellectual immaturity and not moral perversity is the reason why a preschooler continues to pester his mother even after she plainly tells him she has a headache.

Learning Alternatives. The child reaches the threshold of grown-up logic as early as seven and usually by eleven. Before that point, he may think that water becomes "more to drink" when it is poured from a short, squat glass into a tall, thin one with the same capacity. The reason for this stubborn misconception is that the child is paying attention only to static features of his environment, not to transformations. Now, at the age Piaget calls that of "concrete" intellectual activity, the child can deduce that pouring does not change the quantity of the water. He has begun to reason and to grasp the essential principle of the equation.

Between the ages of eleven and 15, the child begins to deal with abstractions and, in a primitive but methodical way, set up hypotheses and then test them, as a scientist does. In one experiment, Piaget handed children a weight at the end of a string and asked them to find out what determines the speed of the pendulum's swing. As he watched and asked questions, he found that the children were spontaneously considering all the possible variations: changing the weight, letting it drop from increasing heights, giving it stronger shoves, or changing the length of the string. Even children who never had seen pendulums before tried each possibility until they found that only shortening or lengthening the string did the trick. Quite possibly, Piagetians sometimes speculate, adolescents' fascination with their ability to visualize alternatives is what makes them so eager to test new life-styles and utopian ideals.

Classroom Hens. The timetable that seems to control the development of intellectual skills, Piaget is convinced, suggests that man's capacity for logical thought is not learned but is embedded, along with hair color and sex, in his genes. These innate rational tendencies do not mature, however, unless they are used. Although Piaget has refrained from applying his findings directly to teaching, educators see some implications. A child cannot be forced to develop understanding any faster than the rate at which his powers mature to their full potential, and there is a limit to what over-eager parents and teachers can achieve. At the same time, a child who does not get the chance to apply his developing abilities and test their limitations may never reach his full intellectual capacity. Thus programs aimed at the disadvantaged, like Operation Head Start, may greatly increase a child's chance of attaining that potential.

Piaget has observed repeatedly that children explore the complexities of their world with immense zest, and his findings have given encouragement and innumerable specific suggestions to the "discovery method" of teaching. Now used in many schools across the U.S. and in Great Britain, the method draws also on the ideas of John Dewey, Italian Educator Maria Montessori and Harvard Psychologist Jerome Bruner. Discovery classrooms, in essence, are informal laboratories where children gain an early familiarity with the principles of Euclidean geometry by manipulating variously shaped objects, and learn fundamentals of counting and reproduction by charting the egg production of classroom hens. As Piaget said recently, "a ready-made truth is only half a truth. The goal of education is not to increase the amount of knowledge but to create possibilities for a child to invent and discover, to create men who are capable of new things."

Piaget himself is a lapsed biologist who never outgrew his fascination with the orderly growth of organisms. Born in Neuchâtel, Switzerland, he was a child prodigy who published important papers on mollusks before he was out of high school, later became "haunted by the idea of discovering a sort of embryology of intelligence." In 1920 he went to work in the Paris laboratory of Psychologist Theodore Simon, a co-developer with Alfred Binet of the first successful IQ test. Poring over the "wrong" answers that children regularly gave on the tests, Piaget was surprised to see that the responses fell into patterns that differed according to the children's ages.

Appointed director of studies at Geneva's Rousseau Institute, Piaget continued to investigate this phenomenon. He spent long hours observing the crib activity of his own three children, shot marbles on hands and knees with Genevan boys as he tested their ideas and feelings about ethics and the rules of games, and gently asked schoolchildren questions about the numbers and groupings of flowers and beads that he gave them to play with. His investigations led him to detailed observations on how children acquire such complicated concepts and abilities as space, geometry, causality, logic, moral judgment and memory. *Le Patron*, as he is known to associates, currently presides over a staff of 25 at his Institute of Education Science and churns out most of his books and articles during the long summer retreats at a farmhouse in the Alps.

Compelling Conception. Piaget's critics feel that his conclusions are based more on his canny intuition than on demonstrable scientific evidence. He scorns the use of statistical measurements and controls, which makes it difficult to prove that the children he has studied are typical. Some educators and child-guidance experts, particularly in the U.S., say Piaget's sweeping concepts are of little help in explaining or diagnosing the differing motivations and accomplishments of individual children.

Nonetheless, supporters outnumber detractors. Harvard's Bruner, Piaget's most appreciative critic in the U.S., voices a common reaction when he acknowledges that Piaget's general conception of the growing mind "is so compelling that even in attacking it one is inevitably influenced by it." At the very least, Jean Piaget has enabled adults to approach children more sensitively and realistically–and perhaps even with greater awe.

* American publishers recently have brought out two guides for laymen. Piaget's *Theory of Intellectual Development* (Prentice-Hall, $6.95), and *An Outline of Piaget's Developmental Psychology for Students and Teachers* (Basic Books, $4.95). In addition Piaget and his longtime associate, Bärbel Inhelder, have summarized his discoveries in a new book called *The Psychology of the Child* (Basic Books, $5.95).

Snippets

Short articles and excerpts from TIME's coverage of psychology through the 1960s

May 30, 1960

The title of this one-page article is, "Mental Health on the Job: Industry's $3 Billion Problem." The mental health programs of a few major corporations are highlighted, following the item's two lead paragraphs, which give evidence to the recency of psychology in the workplace.

Having learned the wisdom of caring for its workers' physical welfare, U.S. industry is now debating a new question. Should it also concern itself with their mental health? Once, a worker's emotional state was considered strictly his own business, like the sort of food he ate. But in recent years, many a corporation has recognized a close relationship between the worker's mental state and his performance on the job. Many businessmen are coming to believe that it is only "practical humanitarianism" to try to increase efficiency by improving employees' mental health.

Kennedy, 1960

Charles J. Zimmerman, president of the Connecticut Mutual Life Insurance Co., estimates that each year mental illness on the job costs business $3 billion directly–enough to buy 150 million hours of psychiatric time at $20 an hour–and another $9 billion in indirect costs. Psychiatrists believe that about one in four U.S. workers has a personality disturbance, ranging from anxiety and psychosomatic illnesses to the severe mental disorders, *e.g.* , schizophrenia, that afflict an estimated 1% of the working force. Such disturbances, they contend, are the real causes of many of industry's most common employee difficulties: alcoholism, accidents, resistance to authority, high job turnover, shirking, chronic complaints. Emotional illness causes more absenteeism than any other illness except the common cold, and psychiatrists believe that 70% of all those fired for other reasons (fighting with the boss, sloppy work) are actually suffering from emotional disorders.

December 5, 1960

Perhaps the most noteworthy aspect of this research is that it was done with chickens as subjects–and chicken subjects aren't found often in psychology's literature.

Why does a chicken cross the road?

A scientific answer: it is probably seeking the company of other chickens, and if it is a young chicken, this sociability indicates that it was raised with other chickens around. These are the findings reported by University of Maine Psychologists Alan Baron and George B. Kish, who measured the effect of early isolation on chicken behavior. They hatched 30 chicks in a dark incubator. Ten chicks were then moved to individual cubicles, getting no chance to see one another. Ten more were cooped in pairs, and the remaining ten were kept together as a small sociable flock.

After four weeks, the chickens were tested for sociability by putting them one by one in an apparatus that kept automatic track of how much time they spent near a "stimulus" chicken separated from them by a partition of wire mesh. The chickens raised in a flock or in pairs showed intense togetherness, spending nearly all their time close to the other chickens. But the chickens raised in isolation fled to the far end of the cage.

After the first tests were completed all the chickens were put in a single flock and kept together until they were ten weeks old. When they were cooped again in the togetherness tester, they all behaved pretty much alike toward the stimulus chicken on the other side of the wire. Baron and Kish conclude that chicks raised in isolation feel little attraction for their own kind, but after they have flocked together for six weeks, they learn to be as sociable as other chickens.

Chickens are not much like humans, but Baron and Kish believe that their chicken study should bring cheer to parents of standoffish human young. If a child's withdrawnness comes from overprotection and isolation in his early years, he may be helped as the chickens were, by being put in a flock where he can come to know and get along with his own kind.

June 16, 1961

Referred to as "the last survivor of psychology's big three" (the other two being Freud and Adler), Carl Jung's obituary appears:

"Death is psychologically just as important as birth," wrote Carl Gustav Jung. "As the arrow flies to the target, so life ends in death . . . Shrinking away from it is something unhealthy and abnormal which robs the second half of life of its purpose."

Dr. Jung never shrank from death, but with his powerful constitution and ever-young inquiring mind, he held it long at bay. Last week, in the willow-shaded seclusion of his home at Küsnacht, on Lake Zurich, the long-poised arrow flew to its target. Death came peacefully, just short of his 86th birthday, to Carl Gustav Jung–the last survivor of psychology's Big Three and of the great feuds that raged among them.

Sigmund Freud saw the prime mover of the unconscious as sexual energy or libido. Alfred Adler made it the drive for power to overcome inferiority feelings. In his "analytical psychology," Jung divided the unconscious into two layers. Within one, relatively superficial, he gave libido and the power drive less ambitious roles. In the second and far deeper stratum, he perceived the force of the primeval, collective unconscious of the human race.

To Jung, the systems constructed by his rivals were narrow-gauge, "nothing-but" explanations of human behavior and aspirations, which reduced man's most numinous visions to sordid sex symbols and shrank his soul to the vanishing point. Jung posed bolder concepts–reaching for the ultimate limits of the universe and of man's relationship to his God or gods.

Romantic Wallowing. "Sigi" Jung (nicknamed from the Schwyzerdütsch pronunciation of his initials), only son of a Reformed Church pastor, had a lonely, bookish boyhood in Basel. His father began teaching him Latin at six. In adolescence he wallowed in the German romantics. He read Greek and Sanskrit and steeped himself in philosophy. He thought of becoming an archaeologist. To please his father he took up medicine, and began digging into the minds of patients.

Teaching and practicing in Zurich, young Dr. Jung was fired by Freud's descriptions of psychoanalysis. In 1907, he made a pilgrimage to Vienna and was confirmed in the Freudian faith. In the tall Teuton, Freud saw his heir apparent.

But Jung persisted in his own digging. He began to unearth "archetypes"–patterns of experience and feeling that have reappeared down the ages in dream symbols, as collective myths, or in the arts. Among the most significant, the "old wise man" and the "earth mother."

Break with Freud. Jung classified basic personality types as extraverts or introverts, then added a breakdown by function. "With perception, you know something is there. Thinking tells you what it is. Feeling tells you what it is worth to you or to others. And intuition tells what the damn thing comes from or goes to." Finally, in the persistence of religious movements throughout history, Jung saw an archetypal need for a religious attitude. A religion did not need to be formalized, he insisted; but to be emotionally healthy, a man must have made his peace with the unseen and perhaps unknowable power behind creation and the universe. Unable to accept the sex-centricity of psychoanalysis, Jung broke with Freud in 1913. But as a sworn foe of rigid organizations, Jung discouraged his followers from starting formal institutes to perpetuate his own teaching.

With advancing years, the "old wise man" withdrew more and more from the arena of battling psychologies, concentrated on his mystical and often obscure writings. He took no part in public affairs, although during one dark period, he edited a psychiatric journal published by a Nazi group who used his race-memory theory to promote their racist creed.

Freudian teachings have captured many a citadel of psychiatry, and the name of Freud has become a household word as Jung's never will. But no science of the mind with any claim to catholicity can deny the influence of Jung's thinking. Though it be denied or rejected, it is part of the collective unconscious of psychiatry itself.

November 24, 1961

Upon reading this article–and then reading again, just to be sure–it is difficult to believe that it reports on a meeting (a symposium) of psychiatrists and physicians!

The ancient Greeks combined *syn* (with) and *posis* (a drinking) to produce–as it is now anglicized–symposium, a drinking party. Last week a group of psychiatrists and other physicians gathered with sociologists and biochemists at the University of California School of Medicine for a symposium on drinking. The consensus: symposiums are wonderful.

Yale's Dr. Leon A. Greenberg reported on experiments made with 1) rats that he was trying to make neurotic by subjecting them to unexpected noises, and 2) rats that he had already made neurotic by the same means. He found that a couple of rat-size drinks greatly helped those in the first group to ward off neuroticism; the same treatment for the already neurotic rats merely turned them into confirmed drunks.

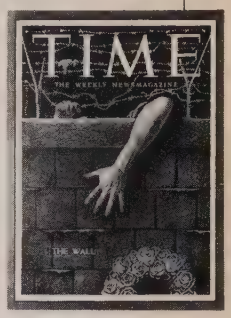
How to Be Inefficient. Northwestern University's Psychiatrist Jules H. Masserman amplified the thought, arguing that all use of alcohol is an attempt to stave off neurotic reactions to stress. "Addiction to drink," said Masserman, "is a 'disease' only in the sense that excessive smoking, gambling or wandering are also 'diseases,' that is, condoned ways in which men try to haze over, compensate for, challenge, or escape from uneasiness." In appropriate doses, he said, alcohol is one of the most effective of "nepenthics," which he defined as drugs that "soothe both the patient and the physician."

Columbus' Dr. Chauncey D. Leake boldly endorsed the dinnertime drink ritual: "Use of alcoholic drinks at the end of an emotionally grueling day may have a real civilizing effect on the over-tense, overwrought, over-anxious and over-irritable husband seeking rest and peace in his home. A couple of drinks perform wonders in helping husbands and wives to feel more tolerant and understanding of each other."

The cocktail hour was singled out for approval by Dr. Giorgio Lolli, who divides his research time between Rome and New York. To be efficient much of the time, he argued, every man must have some time to be inefficient and recharge his batteries. The cocktail hour is ideally inefficient, Dr. Lolli suggested. As for the man who takes too many: "Inebriety, from its mildest manifestations to the extremes of stupor, is only an alcohol-induced form of inefficiency at the wrong time, the wrong place, and for the wrong reasons."

As every social drinker knows, the way to enjoy drinking without getting too drunk, too fast, is to eat as well. Dr. Lolli suggested that this device may not be simply a matter of food volume or blood-sugar levels: "I have a suspicion that some very spicy food items might help a lot. South Americans use these and tolerate alcohol relatively well. I am going to investigate such items as pizza and anchovies." He also explained a common experience–that of the anxious girl on a date who may at first show remarkably little effect from drinking and then suddenly passes out. Her tenseness, he said, closes the pylorus (the gate valve at the lower end of the stomach) and keeps the alcohol in. When she suddenly keels over, stoned, it is because the pylorus has opened and spilled all the alcohol at once into the small intestine, from which it reaches the blood and brain.

Two Took to Port. If some people drink too much, many old people drink too little, suggested Brooklyn's Dr. William Dock. "The carefree attitude derived from alcohol, so dangerous for the automobile driver," he said, "is most helpful for the aging parents of normally ungrateful children, for the man or woman with failing sense organs or vital organs, with dying contemporaries and narrowing circle of friends," or with income eroded by inflation.



Berlin Wall, 1962

Dr. Dock cited three of his own aunts who had lived happily and usefully until they were 70, then began to suffer the afflictions of age. Two took to port wine and gloated that they did not need drugs, while the third took to valerian (a root drug laced with alcohol) and gloated that she did not need wine. All three enjoyed life more (one to the age of 99) and became easier to get along with. "Ever since seeing this," said Dr. Dock, "I have felt that what is needed in retreats for ailing or aged people, and even in city hospitals, is a regular alcohol ration."

After three days of mixing thinking and drinking, Physiologist Greenberg summed up the symposium concensus: "Alcohol is the safest, most available tranquilizer we have."

September 7, 1962

In a short item, titled "Suicidal Students," we read of a paper presented to the fall meeting of the American Psychological Association:

The man who gets high marks, the Cornell researchers said, is also the man most likely to attempt suicide.

The investigators did not claim that all bright students are suicidal, but after a study of Cornell students suffering from serious emotional problems, they were convinced that "patients with suicidal tendencies were as a group, good, or very good students."

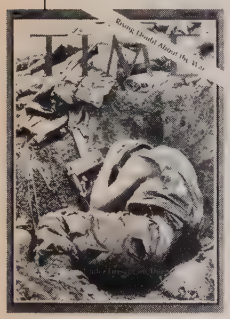
The best that a college can do for such disturbed students, said Braaten and Darling, is give them medical leave of absence for treatment away from the campus, "where at least the psychological pressures of college are removed."

August 23, 1963

It is now difficult for many of us to

remember that it wasn't that long ago that PKU was a significant cause of mental retardation. Because of the development of tests, early detection, and relatively simple treatment, PKU is no longer considered a threat to mental development. This article is titled, "Detecting Poisons at Birth."

The Massachusetts department of public health decided a year ago to turn the commonwealth into a proving ground for an all-out attack on an inherited metabolic disorder, phenylketonuria or PKU, which causes severe mental retardation. (At least 5,000 of the 5.5 million mentally retarded in the U. S. are PKU victims.) Because of a defective gene inherited from both parents, a PKU baby cannot make use of phenylalanine, which is found in most protein foods, and the poison that accumulates in his system as a result permanently damages the brain. But if PKU is detected early enough, a special diet will avert nearly all the damage.



Viet Nam, 1967

February 12, 1965

Only a few years later, with the revision of the *Diagnostic and Statistical Manual of Mental Disorders*, homosexuality would no longer be officially classified as a psychological disorder that necessarily ought to be treated. But here, in 1965, is an article claiming in its title that "Homosexuals Can Be Cured."

One reason why homosexuals are so rarely cured is that they rarely try treatment. Too many of them actually believe that they are happy and satisfied the way they are. Another reason, says Philadelphia's Dr. Samuel B. Hadden, is that too many psychiatrists are still inhibited by the 45-year-old pessimism of Freud, who was convinced that the condition was discouragingly difficult to treat. Even when psychiatrists do try to aid homosexuals, their efforts are likely to be ineffectual because they themselves have so little confidence of success. Both patients and doctors are wrong, Dr. Hadden told the American Group Psychotherapy Association in San Francisco last week.

Male homosexuals, he said, are more treatable and curable than is generally believed.

The psychiatrist's most important assets in treating homosexuality, says Dr. Hadden, are an understanding attitude toward his patients and confidence that their illness can indeed be treated.

April 14, 1967

The stress of battle in Viet Nam: Here's the report of a truly "in vivo" study by a psychiatrist who flew in helicopter gunships and marched with a detachment of the Green Berets, all to determine levels of "stress hormone."

When primitive man found himself confronting a savage beast, according to the great physiologist Walter B. Cannon (1871-1945), his hormone system poured out a flood of adrenaline to equip him equally well for "fight or flight." Now it is known that the hormone system is far more complex. Besides adrenaline, and perhaps more important, there are the hormones produced in the adrenal gland's cortex–hydrocortisone and closely related compounds. And a new study indicates that today's fighting man, far from flooding himself with such hormones in times of stress, actually finds subconscious ways to suppress them.

Waste Not. To carry out the study, the U.S. Army sent Captain Peter G. Bourne to Viet Nam. Although he is a psychiatrist, Dr. Bourne decided to use biochemical indicators of servicemen's reactions to combat and the threat of death. In Saigon he made friends with the medical corpsmen of helicopter ambulance crews since they were medically oriented and most likely to cooperate in his demanding routines. They agreed to run a daily checklist of their emotional changes.

Most important, they agreed not to let a drop of their urine go to waste for three weeks, though this meant having a technician follow them around in off-duty hours. Dr. Bourne wanted these round-the-clock specimens because the chemicals in them would reveal what levels the stress hormones had reached each day. Despite some unavoidable misses, he got 76 day-and-night samples from the group. He froze part of each and sent the specimens by air to Washington for analysis.

The delicate biochemical readings proved to be remarkably uniform for all the men, and differed little between flight-stress days and relaxed, off-duty days. They tallied closely with what Dr. Bourne deduced from flying and talking with the men on dangerous missions. On the average, they showed less reaction to stress than do draftees undergoing basic training at Fort Dix, N.J. When the stress and danger were real, the men suppressed their anxiety and related reactions. One man, an unquestioning Roman Catholic, was convinced that God would look after him. Another, with a parimutuel mentality, had painstakingly taken the reported casualties and calculated the chance that any one man would be killed or injured on any single day. The risk, he concluded, was so slight that he could stop worrying. All the men, no matter how often they talked of near misses by Viet Cong ground fire, had convinced themselves of their own invulnerability.

Evening Peak. Since the flying medics were a special breed, exposed to enemy fire for only an hour or two at a stretch and not every day at that, Dr. Bourne wanted to study the reactions of ground forces in constant danger and therefore under continuing stress. To do this, he and Technician William M. Coli joined a Green Beret detachment of two officers and ten enlisted men stationed at Duc Co, southwest of Pleiku and only a few miles from the Ho Chi Minh trail. The Green Berets had good reason to be edgy. The study began during the dark of the moon. The monsoon was beginning. Ho's birthday was approaching. And U.S. intelligence kept warning Captain Wells E. Cunningham that an attack on his tiny force was imminent.

It was difficult to get specimens under these conditions. Says Captain Bourne: "We practically said, 'Let us have your urine while you're being shot at.' " As it happened, all Viet Cong attacks were aborted before they could reach the camp. But that made no difference to the Bourne study. The men were under relentless cyclic stress, which reached a peak every evening with the prospect of a night attack. One day when intelligence said that an attack was expected, 30% of the G.I.s developed "the G.I.s"–diarrhea. But all, like the medics, showed normal or subnormal levels of stress hormones.

Captain Cunningham (who was killed in action a week after the Bourne team left) and his executive officer both had 30% higher levels of stress hormones than the enlisted men. Explains Dr. Bourne: "The officers were worrying about their men; the men were worrying only about themselves." In all probability, he says, any of the men studied would have had a higher stress hormone level back home on the eve of a tough college exam than they showed in Viet Nam.

July 11, 1969

In the late 1960s, TIME began its now familiar BEHAVIOR section. A major

piece was devoted to "Reinforcement Therapy: Short Cut to Sanity?" A number of examples are provided, and most of the claims made for these earlier versions of behavior therapy have–by and large–come to pass.

Unlike psychiatric techniques which seek to deal with deep-seated causes of a patient's psychosis, reinforcement therapy concentrates on controlling and guiding everyday behavior. Its basic principle is that the residual signs of normality in an insane person should be encouraged by praise and applause–in effect, reinforced and taught with the help of tangible rewards.

The principles that underlie reinforcement therapy go back to Russia's Ivan Pavlov, whose classic experiments with salivating dogs first proved that human and animal reflexes could be conditioned. His theories were expanded by the greatest living exponent of behaviorism, Harvard Psychologist B. F. Skinner, who demonstrated that rats, pigeons, and even men are influenced by the consequences their actions have. This principle, the reinforcement therapists insist, applies also to mental patients previously thought to be beyond psychiatric help.

Leonard Krasner, a pioneering reinforcement therapist at the State University of New York's Stony Brook campus, predicts that "within ten or fifteen years, many of the present techniques of psychotherapy will generally be acknowledged to be archaic, ineffective and inadequate." Most mental-health experts still need to be convinced.

October 10, 1969

Psychology goes to war. This time the war was in Viet Nam. The time frame was when most of those on the home front seemed to be demonstrating against the "nasty little war." If the statistics count for anything, Viet Nam saw fewer cases of debilitating mental disorder—fewer by a factor of ten. Accounting for the difference is the story of this article, called "Dividend from Viet Nam." Notice that the article refers to mental health problems at the time of the war itself. At this point in time "post-traumatic shock syndrome" and the Viet Nam war were not related concepts.

During World War II, U.S. Army field commanders discovered that they were losing more troops to combat stress than to the enemy. One man in ten was knocked out of action by battle-induced mental disorder: in 1943, more men were discharged because of psychiatric reasons than were inducted. Moreover, such casualties were usually eliminated permanently from the war; they were shipped home and discharged. Today in Viet Nam, the psychiatric casualty rate is down to one man in 100. And most of the victims rejoin their units within two days.

One reason for this dramatic reduction is a considerable improvement in the fighting man's lot. Hot meals almost daily, swift evacuation of the wounded by helicopter, regular periods of R and R (rest and recreation) far from the battle zone, steady troop rotation–all these, by contributing to the soldier's peace of mind, have helped prevent mental wounds. But the major reason for the improvement lies in psychiatry's new understanding of and approach to battle stress.

In Viet Nam, the fighting man is seldom out of reach of a psychiatrist: each combat division has its own. There are also two fully staffed mental health clinics that accept the disturbed patient in a most unmartial atmosphere. Military ceremony and the rule book are dropped at the door. Says Colonel Thomas Murray, chief Army psychiatrist in South Viet Nam: "Some of our psychiatrists are the most improbable military guys: soft, flabby, unexercised." In this deliberately demilitarized ambience, the soldiers recovery begins.

It is there, too, that combat therapy radically and abruptly departs from its civilian equivalent. "Our aim is not to please the patient," says Murray. "At home, the psychiatrist's orientation is toward kindness, consideration, tender loving care. Here, to be kind would be to send your patient home." The purpose of military therapy, however, is not cure, but amelioration. It is to get a disabled fighting man back on the line–or, if possible, to keep him on the line.

Stress Syndromes. Techniques are being tried that might not be approved by the American Psychiatric Association. In Korea, for instance, captured American soldiers who were subjected to brainwashing showed more stubborn loyalty to their military outfit than to their own moral values or even their country. In Viet Nam, this knowledge is being applied by treating the battle-shocked man not as an individual but as part of his unit. Men like Major Joel Kaplan, 33, who heads the U.S. Army mental hygiene clinic in Nha Trang, recognize a number of stress syndromes that can tear the unit apart–and, in so doing, generate individual psychiatric casualties.

One of these is known as the f.n.g. (for "f_____g new guy") syndrome. Because of the twelve-month troop-rotation policy, each combat unit gets periodic transfusions of "new guys" unannealed by fire. The raw arrival is greated with naked suspicion and hostility by a fighting force whose very life depends on group solidarity. Field commanders are now encouraged to prepare the new man for his chilly reception so that he will know what to expect. To abbreviate the period of distrust, the most seasoned veteran in the outfit is often made the new man's mentor and supervisor.

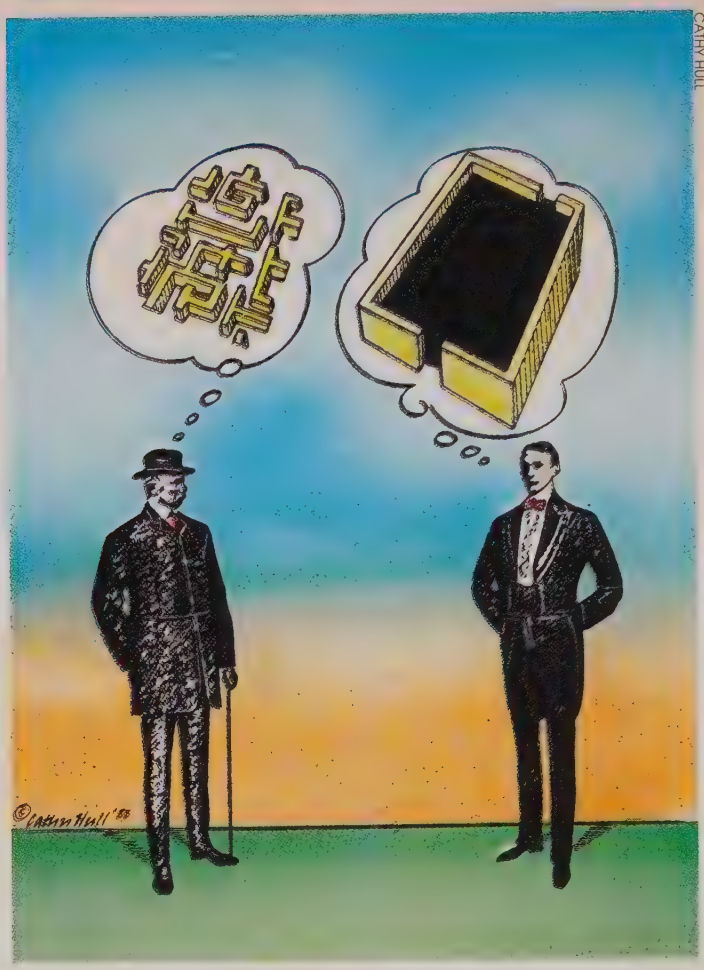
Armstrong, 1969

Another group crisis threatens when the fight unit undergoes a change of command. This evokes feelings of rejection and anger that can, and frequently do, engulf the new commander. Discipline plummets, and sometimes the departing officer may himself hasten the process by shucking his role as leader, accepting his troops as equals, granting extra privileges and even hinting that the next commander might be something of a martinet. Such crises can be averted, or at least ameliorated, if the departing officer is made aware of the problem and advised to tighten discipline and control before he leaves.

New Breed. This approach, first used during World War II, helped establish one of psychiatry's newest methods: group therapy. If the efficacy of such treatment needs any further proof, psychiatrists in Viet Nam feel that they have provided it beyond any doubt. But the value of their experience may go well beyond that.

Moratorium, 1969

Combat psychiatrists see the battlefield not so much as a special environment but as a kind of telescoped, infinitely more stressful version of ordinary life. For this reason, and to get the men back to duty as quickly as possible, the Army is creating a new breed of lay therapist, from the battalion surgeon to the squad sergeant to the commanding officer. All these men stand on the line with the soldier. If they are taught to understand and deal with the factors that can cripple a fighting man without visibly injuring him, they can provide an effective, on-the-spot countermeasure against this elusive enemy. In Viet Nam, the lessons are being learned.



The 1970s

Sexuality and the Women's Movement; behavior therapy; sex before the big game said to be beneficial

Nixon took some giant steps when he toured Red China, sold grain to Russia, and pulled the last troops from Viet Nam, but fell on his face when the Watergate tapes turned up. Ford promptly pardoned his predecessor and turned to inflation and unemployment in an attempt to restore America's faith in federal government. Civil war broke out in Beirut. Joplin and Hendrix took too much. An accident at Three Mile Island left scars that would last for years to come. As Americans eased into hot tubs, streaked across campuses, and singles started families solo, smilin' Jimmy Carter moved to Washington and gave the canal back to Panama. The President's Camp David talks and Sadat's peace junket meant a treaty for Egypt and Israel, while further east, Indira Gandhi played election games. The Soviets entered Afghanistan. Thatcher entered Parliament. Women entered the job market in cities across the country. Then Carter took hold of the energy crisis, but his dealings with Khomeini's hostages weren't quite so successful. Their families wouldn't untie the yellow ribbon until Reagan moved into the White House in the decade to follow.

May 25, 1970

It was early in the 1970s, just four years after the publication of *Human Sexual Response*, and there they were on the cover of TIME: William Masters and Virginia Johnson. The article focuses on sex therapy–its history and the Masters and Johnson approach. In many ways, this cover article reflects the popular view of psychology throughout the entire decade.

Repairing the Conjugal Bed. Harry Miller is not his true name, but his problem is genuine enough. He is a failure in bed. Years have passed since Harry and his wife, who are in their late 30s, have given or taken any pleasure in sex. With considerable hesitation and embarrassment, they confided their difficulty to their minister, who was sympathetic but unable to help. He referred them to the Reproductive Biology Research Foundation in St. Louis. On arrival, the Millers checked into a red brick residential building where the foundation leases apartments at $100 a

week for out-of-town patients. At 9 the next morning, they called for their first appointment.

Before long, the sexual anxieties and fears that brought the Millers to St. Louis began to dissolve. The foundation, which is discreetly identified as the Central Medical Building, could pass for an ordinary medical clinic anywhere. Inside, piped music vies softly with a professional and somehow reassuring hush. A woman attendant, dressed in the white pantsuit and beige silk scarf that is the uniform for the foundation's female staff, directed them to the second floor.

Ultimate Communication. There they met Dr. William Howell Masters, the director, an owlish, stern-looking man of 54, and Mrs. Virginia Johnson, 45, his research associate, whose manner is as outgoing as Masters' is reserved. The Millers were told that this first interview, and all others, would be taped–a measure designed to protect the patients by eliminating stenographers from the necessary history-taking. They were reminded of the foundation's credo as worded by Masters: "There is no such thing as an uninvolved partner in a sexually distressed marriage." Indeed, had the Millers not entered treatment together, they could not have entered at all. Finally, they were asked to refrain from any sexual activity whatsoever until otherwise directed.

The message, in short, was that the Millers were not there to perform or be judged. They were there to rediscover, under guidance but not observation, the ultimate form of human communication that takes place in the marriage bed.

The Millers are a hypothetical though representative example of the 790 cases of sexual incompatibility that have been treated in St. Louis over the past eleven years. In a new book called *Human Sexual Inadequacy* (Little, Brown: $12.50), Dr. Masters and Mrs. Johnson summarize their therapeutic approach to the problem of what they call sexual "dysfunction." Written in less than six weeks, the book is poorly organized and clotted with a jargon that makes it almost unreadable for all but the doctors, psychologists, marriage counselors and other professionals for whom it was intended. Nonetheless, the work is already a best-seller, and with some reason. In the underdeveloped field of sex research, the authors are pioneers; they are the most important explorers since Alfred Kinsey into the most mysterious, misunderstood and rewarding of human functions.

Masters & Johnson, 1970

Masters and Johnson take a modest view of their work. "We do not pretend expertise in anything," says Masters. "Ours is a small, somewhat determined research effort–the first study of the physiology, and to a major degree the psychology, of sexual function. Many people will be in the field in due course and will do a better job."

It is a job that needs to be done. Masters argues that "the great cause for divorce in this country is sexual inadequacy. And I would estimate that 75% of this problem is treated by the psychologist, the social worker, the minister, the lawyer. Medicine really has not met its responsibility." No one knows the extent of the problem. The foundation's educated guess is that perhaps half of the 45 million married couples in the U.S. are sexually incompatible to some degree.

Sex as Salvation. In an era of pop sex, which fictionally and visually glorifies coition and accepts the idea of honeymoon-before-marriage, it might seem strange that there are any sexual hang-ups left to be treated. Whatever the "sexual revolution" may mean, it certainly has freed modern woman of the Victorian notion that females do not enjoy sex; the modern woman knows what she is missing, erotically speaking. On the other hand, the American male has succumbed to the widely advertised notion that he should be the super-performer in what has been called the decade of orgasmic preoccupation–a preoccupation that could be enhanced by Masters' and Johnson's emphasis on sex as a form of salvation.

Behind this new (or old) morality lurk many of the same fears of inadequacy, the same sexual myths and mistakes, that disturbed earlier generations. Dr. Eugene Schoenfeld ("Dr. HIP pocrates"), whose freewheeling column of medical advice runs in 15 underground newspapers, reports that a surprising number of his supposedly liberated young male readers worry about penis length. He also gets letters from men with hang-ups about masturbation: "They're worried that it will grow hair on the palms of their hands or rot their brains out or something." Virginia Johnson has known women who thought that men, like Priapus, have permanent erections. "A lot of uninformed women," she says, "are like the little kid who, upon learning about pregnancy for the first time, said, 'In there with all that spinach!'"

In their treatment of sexually myth-ridden patients, Masters and Johnson use an eclectic and considerate approach. For example, the use of therapeutic teams composed of one man and one woman relieves the couple entering treatment from having to discuss, at first, humiliating shortcomings with someone of the opposite sex. The foundation has two such teams and hopes eventually to train two or three more.

Within three days, if things go right, the patients are talking openly to both therapists–and to each other. By then they have been given a thorough physical examination and are ready, despite nervousness, to begin the physical part of the treatment, which is carefully calculated to ease the burden of fear, shame and ignorance that impedes normal sex function. The couples are told that nothing is expected of them and that much more can be learned from occasional failures than from unbroken successes in the course of treatment.

Role Reversal. At the direction–never the command–of their therapists, the patients are encouraged to begin exploring the latent capabilities and mysteries of their bodies. As a first step, they are asked to disrobe in the privacy of their apartment bedroom and caress each other in ways only indirectly sexual–a gentle stroking of the back, a hand lightly tracing the contours of a thigh. Taking turns is an important part of the therapy. One spouse is the giver, the other the getter of pleasure. The roles are then reversed. In succeeding sessions, the caressing becomes more intimate, until at last the partners explore the full pleasure potential of sexual union. The clinic's approach is to remove, or at least reduce, the pressures that can turn sex into a dreaded command performance. Each day, the couples return to the clinic for an extended discussion with the therapists. Outside of that, their schedule is their own; they find their own way freely, and at their own pace. As part of the process, the couples are granted what might be called sexual vacations. One day, for instance, without warning, they will be asked to do nothing more intimate that evening than go out to dinner and a movie. And never are the patients graded in any way; never is it proposed that they are ready for the consummating moment. Says Virginia Johnson: "Just going from A to B may be enough: it is not necessary always to go from A to Z."

Indeed, Masters and Johnson do not speak of success rate but of failure rate. "Sexual adequacy," says Masters, "is probably a state of mind." So is sexual inadequacy. Chief among its manifestations are primary impotence (the male's lifelong inability to

achieve vaginal penetration), secondary impotence (at least one successful penetration), and among women, the inability to reach orgasm, either all or most of the time.

Failure rates varied widely. For primary impotence, a symptom treated in 32 males, it was 40%–in the authors' judgment, a clinical "disaster." On the other hand, vaginismus–a form of muscular spasm making intercourse difficult or impossible–proved totally amenable to treatment. All 29 of the patients with this complaint were cured within two weeks.

The foundation's overall failure rate, after five years of follow-up by telephone, was only 20%. The calls are supportive inquiries about how the former patients are getting along. As it turns out, most are getting along fine: 95% of those successfully treated during their two weeks at the foundation report continuing success after five years. Without question the large majority of cases treated by the foundation showed some improvement, however modest. "The level of discovery," says Virginia Johnson, "is often quite phenomenal. It's like 'Gee, oh, gee whiz'–almost that ridiculous–'I felt it. Wow!'"

The very idea that sex researchers like Masters and Johnson can professionally guide couples to mutually satisfactory intercourse still produces some outrage. "There are many people who think that sexual function should never be investigated, that it is simply 'sacred ground'" says Masters. "For those who feel this way, I have no answer except to say that's their opinion and I honor it. I happen to think it is a field in which medicine has a responsibility. It is not a popular opinion."

BEN MARTIN

Masters & Johnson interviewing patients at St. Louis clinic

It has never been popular. The pioneers of research into sexuality–Freud, Wilhelm Reich, Havelock Ellis, Richard von Krafft-Ebing, Marie Stopes, Alfred Kinsey–were initially vilified. Bill Masters openly acknowledges his debt to these precursors, particularly to Kinsey, whose studies, *Sexual Behavior in the Human Male* (1948) and *Sexual Behavior in the Human Female* (1953), were the first serious attempts to analyze quantitatively the variety and nature of "orgasmic encounters." Kinsey's data were flawed by the narrow range of his interviewed sampling and by his determinedly mechanistic approach to the subject of sex. Nonetheless, his research legitimized the study of a hitherto taboo subject. Says Masters: "He opened the door. We wanted to kick it all the way open."

The first kick produced *Human Sexual Response* in 1966, a meticulous description of the physiological changes that take place in the male and female body during sex. The subjects were recruited largely from the academic community at Washington University and its medical school. They were paid to perform coitus, self-manipulation and a variety of other acts while clinic personnel, including Masters and Johnson, watched and filmed the proceedings. Although the book was deliberately written in clinical terms digestible only by doctors, it sold 250,000 copies in hardcover–at $10 each. *Response* also sparked a number of journalistic ponies, plus at least two lubricious novels–*Venus Examined, The Experiment*–about goings-on at sex-research centers. Masters and Johnson became public figures.

Within the medical profession, commentary on *Human Sexual Response* was overwhelmingly favorable. Like most of their predecessors, Masters and Johnson were also subjected to a barrage of stinging criticism that has yet to subside. They were accused of using a troupe of sexual athletes wholly untypical of the population at large. Masters had built a rather bizarre device: a plastic dildo connected to a camera, which could photograph the interior of the vagina. Partly because of this apparatus, the authors were accused of dehumanizing sex and concentrating on technique at the expense of romance and morality. Psychiatrists and clergymen attacked the project as an invasion of privacy. Masters and Johnson were rebuked for writing a book about sex without once using the word love. The authors have chosen not to defend their books, but Masters does have a comment about this particular accusation. "Can you imagine that [as a criticism of] a physiology textbook?" he asks. "The word love is in *Human Sexual Inadequacy*. Just twice. On the same page. Find it."* He believes that the detailed study of sexual physiology in *Response* was a necessary first step toward their second objective: the treatment of sexual failure. "We are studying sexuality in the total context of human experience," he insists. "But we had to start with the how and the what of sex before we could go on to the why."

Insights gained in the authors' earlier study have proved invaluable in therapy. Working with the subjects who contributed to *Response*, for instance, they discovered a simple technique for the prevention of premature ejaculation that has proved highly successful in treatment. In matters of sexual technique, they suggest that the "female superior" position in coitus should be used more often. Not only does this position offer the woman a better chance of achieving orgasm, but it is also useful in the relief of most male inadequacies, since it allows the woman partner more freedom of movement and, hence, more control.

Masters and Johnson have disproved a host of myths that can and do affect sexual satisfaction. Among their conclusions:

- Penis size has nothing to do with sexual effectiveness.
- Baldness is not a sign of virility.
- There is no physiological difference, as Freud first proposed, between a clitoral orgasm and a vaginal orgasm.
- Humans can remain sexually active well into their ninth decade. "All that is necessary," says Masters, "is reasonably good health and an interested and interesting partner."
- Intercourse is not dangerous at any time during pregnancy–unless, says Masters, it is contraindicated by "ruptured membranes, pain and bleeding."
- Masturbation is not harmful.

All of their research reflects Masters' and Johnson's convic-

tion that in the exercise of sex nothing is forbidden as long as it is acceptable and pleasurable to both partners.

So far, their new book has stirred less controversy than their earlier work, perhaps because its intended professional audience has not yet read it. Nonetheless, the Masters and Johnson approach has been sharply criticized by some medical authorities. Manhattan Psychiatrist Natalie Shainess contends that the authors' coldly technical attitude toward therapy robs sex of its joy and meaning. Existential Psychoanalyst Rollo May, who was less than enthusiastic about the authors' research into the mechanics of coital function, says that Masters and Johnson are fighting puritanism with "the new technology"–a dangerous weapon because it contributes to the depersonalization of sex by assuming that sex is part of technology.

The sharpest attack on Masters and Johnson centers on their therapeutic use of what they euphemistically call "partner surrogates" for 41 single men who were accepted by the foundation for treatment. One-third of these patients had once been married: sexual inadequacy was a key factor in their divorces. Even though the philosophy of the clinic is treatment within the marriage context, Masters and Johnson decided to accept these patients.

Giving to Get. The 13 female surrogates, drawn from the St. Louis area, were considered and trained as part of the therapeutic team. They were enjoined against becoming emotionally involved with, or even seeing, male patients once the two-week treatment ended–and none did. To some critics, the surrogates were nothing other than well-meaning unpaid prostitutes. But Dr. Masters, arguing that "these men are societal cripples," asks: "Does society want them treated? If they are not treated, it is discrimination of one segment of society over another." Surrogates were not supplied for women, since, explains Mrs. Johnson, "in our society, the female is taught that only marriage gives her permission to be a sexual creature, and we are only giving her more difficulty if we try to treat her outside of marriage."

Some critics suggest that Masters and Johnson see no relation between sex and morality. In fact, they do take an implicit stand on sexual morality. They believe in the principle–hardly new but easily forgotten–of "giving in order to get." They also believe that sex is a mutual experience into which both partners must enter without reservation or shame, and that the ultimate goal of sex is communication–the only true basis for marriage. Their entire course of therapy is aimed at expelling from the bedroom two invisible people who do not belong there. Masters and Johnson call them "spectators": the man worrying whether he will be successful this time; the woman concerned about her own chances of pleasure in so precarious a situation. Once anxieties about performance have been allayed, once the spectators have left the room, nature can take over unassisted.

Lifelong Goal. Bill Masters and Virginia Johnson reached St. Louis and their dedication to sex research by entirely different routes. Inspired by the passionate medical interests of his younger brother Francis, now a plastic surgeon in Kansas City, Kans., Masters also chose to study medicine. During his junior year at the University of Rochester's medical school, he fixed on his lifelong professional goal. An internship in obstetrics and gynecology in St. Louis reinforced his conviction that sex was the last important biological function that was still largely unexplored. "I got no training in sexual functioning," he says. "Neither did any doctor who went to school. When patients came and began to question me as the 'authority,' I had to admit my appalling ignorance. You get awfully tired of saying 'I don't know.'" After a decade of study in hormonal treatment for the wasting effects of age, Masters began a research program in sexual physiology under the auspices of the Washington University medical school in 1954.

His research associate, born of a Missouri farm family named Eshelman, grew up within the rigid sexual taboos of the backcountry. "I was never told about menstruation or anything," she says. "There was a very rigid rejection of anything sexual. You didn't talk about it." Her 1950 marriage to a musician ended in divorce six years and two children later. Says she: "Musicians are night people and babies are day people, and I couldn't handle it all." She met Masters in 1956 when job-hunting in St. Louis. He was looking for a female research associate for his program. "My attitude was," he says, "that if you're going into sex research, it is apparent that both sexes should be represented. No man is going to know very much about the human female, and no woman is going to know very much about the male." Although Mrs. Johnson now has some credits toward a doctorate in psychology, she has no college degree. "The disciplinary background for this work really doesn't matter very much," Masters explains. "There's no discipline that one can say is uniquely vital to the program."

The foundation claims seven days and two nights of every week and permits the researchers little or no private life. Masters is married and the father of two children, but he adamantly sequesters his family from the inquisitive, presumably because it must not be easy to be the wife or child of a sex researcher. "His whole life is here at the lab," says Virginia Johnson. So is hers, although she does, like Masters, take Sunday afternoons off.

Since 1964, their clinic has operated as a private foundation. It currently has half a dozen projects in motion, among them an inquiry into the physiology and treatment of homosexuality, chiefly female, another aimed at the prevention rather than the treatments of sexual inadequacy. Its operating budget of $500,000 a year comes from private contributions, such small grants as it is able to wheedle out of philanthropic foundations ("None of the big ones would touch us," says Masters. "Too controversial."), and fees from patients, who are charged on a sliding scale that ranges from nothing to $2,500 for the treatment. Masters and Johnson divide their publishing royalties three ways: one-third to the foundation, the rest for themselves.

"Mom and Pop." They insist that they are not sex educators but sex investigators. Nonetheless, they are acutely aware of the public appetite for knowledge–and of the generally unreliable character of the sex information now available. "The greatest form of sex education," Masters once said, "is Pop walking past Mom in the kitchen and patting her on the fanny, and Mom obviously liking it. The kids take a look at this action and think, 'Boy, that's for me!'" Otherwise, the uninformed must depend largely on the flood of literature–1,500 marriage manuals in print, more published every month–that pours out in response to the demand. Much of it is trash. One contemporary marriage manual warns that the health and happiness of man and wife may be destroyed unless their every sexual congress ends in joint climax. By contrast, Masters and Johnson believe that simultaneous orgasm is unnecessary and that its occurrence is "just a beautiful coincidence." Equally undependable as guides to conjugal happiness are two books soaring high on the bestseller lists.

The magnitude of the problem of sexual inadequacy, and their own limitations in treating it, distress both Masters and Johnson. They know that *Human Sexual Inadequacy* will inspire sexually incompatible couples to try do-it-yourself therapy, and they hope that the result will be beneficial. At the very least, says Masters, the book may create a land-office demand for professional help that will force therapists–especially those in medicine–to enlarge their own understanding of sexual function.

Beyond that, he says, readers who suffer from sexual malfunction "will find out they're not the only ones in the world with this affliction, and this in itself is reassuring. They will know that professional help can be sought, and they may have some concept of how to do it. Finally, if they read with any objectivity, they'll

come to realize that the one thing that is lacking in their marriage is some form of communication." Clearly, in the opinion of Masters and Johnson, the best communication of all is conjugal sex.

* Page 299.

August 2, 1971

When this article was published, behavior therapy could claim for itself "no more than 100 practitioners." As you might imagine, references to behavior therapy were even difficult to find in psychology textbooks. Now, of course, behavior therapy in general, and Joseph Wolpe's technique of systematic desensitization in particular, has become part of mainstream psychotherapy.

Neurosis: Just a Bad Habit? Making love in a Volkswagen can be an impossible feat, as a University of Pennsylvania student discovered not long ago. His failure led to a year of impotence that ended only recently when Temple University Psychiatrist Joseph Wolpe cured him in two sessions. Wolpe's treatment: a controversial method called behavior therapy.

The difference between behavior therapy and traditional Freudian psychoanalysis stems from the way each defines *neurosis*. To psychoanalysts, neurosis is the result of unconscious conflicts that influence behavior in complex, mysterious ways. But to behavior therapists, the unconscious does not matter, neurosis to them is a collection of bad habits that were learned much the way Pavlov's dogs learned to salivate at the sound of a bell. Believing that what has been learned can be unlearned, the behaviorists apply conditioning procedures developed in animal laboratories to break old habits and build new ones. Unlike psychoanalysis, which may go on for years, behavior therapy is often completed in fewer than 30 sessions–and it claims success in 85% of its cases.

Desensitization. The new method has no more than 100 practitioners, though the number is growing, and its advocates include such prominent psychologists as Harvard's B.F. Skinner and the University of London's H.J. Eysenck. Last month, as the principal developer of behavior therapy in the U.S., Joseph Wolpe conducted a training institute at Temple for 30 American, Canadian and Mexican therapists who wanted to learn his techniques.

Chief among these techniques is "systematic desensitization," the process a mother uses when she accustoms a baby to the ocean by dipping in one foot first, then a leg, then the infant's whole body. In that case, the delightful feel of the water gets the better of fright. Similarly in behavior therapy, Wolpe uses gradual methods of confronting neurotic behavior to overcome anxiety. The Pennsylvania student, for example, was told that his failure had conditioned him to fear sex, and he was advised to find an understanding girl who would be patient with him until he had conquered his fear by degrees. Approaching her sexually on successive days, he stopped each time he began to feel uneasy; soon the connection between sex and anxiety was broken, and the link between intercourse and pleasure restored. For Wolpe and his colleagues, sexual problems are generally the easiest to cure, because sexual desire is stronger than fear.

When trouble arises not from relationships with people but from such fears as claustrophobia, Wolpe urges his patients to learn to relax. First, however, the patient is reassured: "You are not mentally ill, and there is no danger of your going insane." Then he is questioned about the situations that trigger his anxiety, and the triggers are ranked according to intensity. After the sufferer has been taught to relax completely–through muscular exercises–he is asked to imagine the least frightening trigger: in a person who fears death, it may be the sight of an ambulance. If he becomes frightened, he is told to let go physically, so that relaxation can in effect replace fear. If he remains unafraid, he is asked to think of the next trigger–driving past a cemetery, for example–until at last he can finally confront the idea of what terrifies him most: perhaps a corpse in a coffin.

Related techniques involve what behaviorists call reinforcement and aversion therapy (TIME, March 7, 1969; and July 11, 1969). Basically, the methods depend on the old carrot-and-stick approach, which rewards desired habits and punishes unwanted ones. Male homosexuals, for example, may be given electric shocks when they look at pictures of nude men and granted relief from the shocks when they view female figures. "What we are doing," explains Reinforcement Therapist Ogden Lindsley of the University of Kansas, "is very similar to what progressive businesses do. We constantly monitor performance. But instead of improving sales, we try to improve behavior." Such a pragmatic approach is seen as one of the major advantages of behavior therapy by its supporters. Instead of searching for the elusive causes of neurosis, as in psychoanalysis, behavior therapy deals solely with neurotic symptoms and tries only to correct disturbed behavior.

The use of physical punishment to eliminate symptoms is distasteful to some scientists, including Boston College Psychologist Joseph Cautela, who has found more subtle approaches. Recently Cautela has successfully treated obese patients by training them to imagine that they are vomiting; the idea of nausea was enough to curb their appetites. He has also taught patients to overcome intense fear of flying with a step-by-step fantasy in which the patient "travels" to an airport, rewards himself with the thought of something he likes, such as meeting a friend, then "boards" a plane, thinks of his reward again, and finally manages to take off in imagination–and eventually in reality.

BERNIE CLEFF

Therapist Wolpe (right) treating homosexual patient

Man's Freedom. To its critics, behavior therapy is shallow because it lacks a unifying theory to explain the human personality. Behaviorists are quick to reply that what counts is behavior therapy's effectiveness.

Much harder to dismiss are allegations that behavior therapy threatens man's freedom by manipulating patients like so many laboratory animals. San Francisco's Allen Wheelis, who is both psychoanalyst and thoughtful novelist, believes that a human being who submits to behavior manipulation "is treating himself as object and to some extent, therefore, becomes an object." In a similar vein, Los Angeles Analyst Judd Marmor recently wrote that the new method comes "uncomfortably close to the dangerous area of thought and behavior control." Not so, says Behaviorist Alan Goldstein of Temple University. "People come to us to have their behavior changed. It is not our choice. We don't tell them how they ought to behave."

August 20, 1973

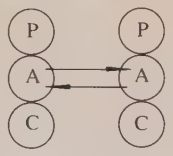
The first sentence of this article provides its context here. T.A., or transactional analysis, was at its peak during the 1970s. It became a way of therapy for some; a way of life for many. More than anything else, perhaps, Thomas Harris' *I'm OK–You're OK* opened the floodgates and out poured hundreds upon hundreds of "pop psychology," "how-to" books.

T.A.: Doing OK. In the 1960s it was encounter groups. In the 1970s it is transactional analysis, or T.A., the pop-psychological path to happiness charted by Sacramento Psychiatrist Thomas A. Harris in his bestseller *I'm OK–You're OK*. T.A., or close facsimiles of it, is now practiced by some 3,000 psychiatrists, psychologists, social workers and ministers in the U.S. and 14 foreign countries. In fact, it may be the most widely used and fastest-growing form of treatment for emotional distress in the world. Says Boston's J. Allyn Bradford, a Congregational minister who runs a T.A. training institute called OK World, Inc.: "Tom Harris has done for psychotherapy the same thing Henry Ford did for the automobile: made it available to the average person."

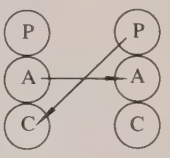
The central thesis of T.A., as Harris teaches it, stems from Psychiatrist Alfred Adler's concept of a universal "inferiority feeling." Most people, Harris says, never stop thinking of themselves as helpless children overwhelmed by the power of adults. For that reason they go through life believing that they are inferior, or "not OK," while they view everyone else as superior, or "OK." The aim of T.A. therapy is to instill the conviction that "I'm OK–you're OK," meaning that no one is really a threat to anyone else and that in the end everything comes up roses.

More specifically, transactional analysts believe that what makes a person unhappy is an unbalanced relationship between the three parts that constitute every human personality: Parent, Adult and Child. Harris rejects any suggestion that these are the equivalent of Freud's superego, ego and id. "The Parent, Adult and Child are real things that can be validated," he insists. "We're talking about real people, real times and real events, as recorded in the brain." Be that as it may, the theory is that unless the mature, rational Adult dominates the personality, or, in the language of T.A., is "plugged in," the overly restrictive Parent and the primitive, self-depreciating Child will foul up most "transactions," or relationships with others.

To put his Adult in charge, Harris says, the troubled person must "learn the language of transactional analysis and use it in examining his everyday transactions." He must also learn to diagram these transactions, using three circles to represent the personality components of each person and drawing arrows to show how two people interact. Parallel lines depict "complementary transactions," which occur, for instance, when a husband's Adult speaks to his wife's Adult and gets a response in kind. In that type of exchange, the husband might ask,"Where are my cuff links?" and his wife might reply, "In your top left dresser drawer"–or, perhaps, "I'm not sure, but I'll help you find them."



Crossed lines like this denote uncomplementary transactions, and bode trouble. For example, the Adult-to-Adult question about



the cuff links might be answered with a sharp "Where you left them," a reproof that comes from the wife's Parent and is addressed to what she sees as the inept Child in her husband's personality.

T.A. therapy sessions usually involve eight to 15 participants and often begin with one member trying to describe why "I'm not OK." The group responds by giving him all the reasons that he should be OK. Therapist and group members alike try to help each member analyze, and change, his "life script"–the blueprint that, according to T.A., a child unconsciously draws up to shape his whole life. Bad scripts may include self-defeating "games" such as "Kick Me," a gambit of the self-pitying, and "Blemish," the ploy of people who compensate for inferiority feelings by pointing out the failings of others.

All Adults. As a way of inspiring group members, T.A. therapists usually make "contracts" with them to achieve specific goals like giving up alcohol or such amorphous ones as "to get more OK," "to be able to give myself to others" or "to exercise more control over my Parent." One far-out leader shouts, "You're OK!" to his groups, and another asks members to clasp hands in a circle dance while singing *Ding, Dong, the Witch Is Dead*. Harris, who now does more teaching and training than therapy, usually begins his lectures with a few jokes to loosen things up. Sometimes he asks a listener to come forward and stand at the foot of the speaker's platform, thus demonstrating what it is like to have to look up at a parent and feel like a "not OK" child. Often, members of Harris' staff surprise the audience by interrupting him with comments of their own. The purpose is to suggest that Harris and his listeners are all adults together, and that he is no parent proclaiming infallible truths to obedient children. Occasionally, he writes out advice on a prescription pad: "I want you, John, to smile and greet ten new people every day."

Harris was trained in medicine, psychiatry and psychoanalysis, but soon became dissatisfied with the results of traditional treatment. "After about five years in psychoanalysis, you get a ton of garbage and an ounce of usable material," he says. "In T.A., we go after that usable material right away." Harris stumbled onto T.A. when he heard a lecture by the late Eric Berne, originator of transactional analysis, author of the 1964 bestseller *Games People Play*, and a self-described "cowboy therapist" whose advice to patients was, "Get well first and analyze later." Before long, Harris had evolved his own brand of T.A. and embodied it in *I'm OK–You're OK*.

Much of the book's success is due to its remarkable popularity among religious groups. The apparent reason: *I'm OK* reveals Harris–a practicing Presbyterian–as a cross between Norman Vincent Peale and Billy Graham. A cheerful mass evangelist, he

preaches a gospel of original sin and carries, as he himself puts it, a "message of hope" to an ever increasing flock of converts. "We simply cannot argue with the endemic 'cussedness' of man," he says, in a characteristic mixture of everyday and evangelical language.

In fact, Harris is convinced that only those who believe the "truth" of transactional analysis can win the battle against neurosis. "You have to have absolute faith that T.A. is true; otherwise you'll lose," Harris once told a group he was leading. Speaking more than half seriously, he told one patient who had not read *I'm OK–You're OK* that "the only thing standing between you and a cure is my book." The book itself goes so far as to suggest that it may be able to save man and civilization from extinction. Harris writes: "We trust it may be a volume of Hope and an important page of the manual for the survival of mankind."

Eugene Carson Blake, former general secretary of the World Council of Churches, finds the values and assumptions of *I'm OK* to be "basically Christian ideas," and an increasing number of mainline Protestant denominations are using T.A. for individual and group counseling. Educators are trying it, too. Last spring Harris and his staff taught 1,000 teachers at the N.E.A. convention in Portland, Ore., how to create "the OK classroom." Business firms (General Foods and Digital Equipment Corp., among others) have experimented with the method, and so have NASA, the Civil Service Commission and the U.S. Naval depot in Oakland, Calif. (A depot contract: "We must move more boxes onto more ships with happier men.") In Berkeley, Calif., Psychologist Claude Steiner has reported success in treating alcoholics with T.A., and in Sacramento, Calif., Pediatrician Dennis Marks says he has helped retarded patients.

Sharp Critic. In the midst of his success, Harris has one regret: "My readers and my patients seem to understand me better than other psychiatrists do." Indeed, President Burness Moore of the American Psychoanalytic Association finds transactional analysis "superficial," and Psychiatrist James Gordon of Washington, D.C., calls it "a hermetic system, defensively, self-righteously complete, dangerously closed to outside criticism and change."

Although he has been a sharp critic of T.A. in the past, Boston Psychiatrist Robert Coles takes a more charitable view. "There is some wisdom in it–of a limited kind," he says. "I don't think it has the depth or breadth of vision of either Christianity or Judaism, let alone of a Freud or a Jung. But neither Freud nor Jung offers the ordinary individual any creeds to live by. T.A. is terribly reassuring. I think worse has been done by people who pretended to more."

January 5, 1976

***The* issue of the 1970s was the "Women's Movement." Feminism and feminists of the '70s have had a lasting impact on politics, economics, and psychology. TIME magazine began a section it calls THE SEXES to deal with the movement on a weekly basis. The following article provides an excellent summary. The year is 1976, the year of the American bicentennial. For this year, TIME's "Person of the Year" became "Women of the Year."**

Great Changes, New Chances, Tough Choices. They have arrived like a new immigrant wave in male America. They may be cops, judges, military officers, telephone linemen, cab drivers, pipefitters, editors, business executives–or mothers and housewives, but not quite the same subordinate creatures they were before. Across the broad range of American life, from suburban tract houses to state legislatures, from church pulpits to Army barracks, women's lives are profoundly changing, and with them, the traditional relationships between the sexes. Few women are unaffected, few are thinking as they did ten years–or even a couple of years–ago. America has not entirely repealed the Code of Hammurabi (woman as male property), but enough U.S. women have so deliberately taken possession of their lives that

American women carrying banner, circa 1917.

the event is spiritually equivalent to the discovery of a new continent. Says Critic Elizabeth Janeway: "The sky above us lifts, the light pours in. No maps exist for this enlarged world. We must make them as we explore."

It is difficult to locate the exact moment when the psychological change occurred. A cumulative process, it owes much to the formal feminist movement–the Friedans and Steinems and Abzugs. Yet feminism has transcended the feminist movement. In 1975 the women's drive penetrated every layer of society, matured beyond ideology to a new status of general–and sometimes unconscious–acceptance.

The belief that women are entitled to truly equal social and professional rights has spread far and deep into the country. Once the doctrine of well-educated middle-class women, often young and single, it has taken hold among working-class women, farm wives, blacks, Puerto Ricans, white "ethnics." The Y.W.C.A. embraces it; so do the Girls Clubs of America and the Junior Leagues. A measure of just how far the idea has come can be seen in the many women who denigrate the militant feminists' style ("too shrill, unfeminine") and then proceed to conduct their own newly independent lives. At year's end a Harris poll found that by 63% to 25%, Americans favor "most of the efforts to strengthen and change women's status in society." Five years ago, it was 42% in favor, 41% against.

1975 was not so much the Year of the Woman as the Year of Women–an immense variety of women altering their lives, entering new fields, functioning with a new sense of identity, integrity and confidence. Those whom TIME has selected as Women of the Year accomplished much in their own right in 1975, and they also symbolized the new consciousness of women generally.

■ In the White House, Betty Ford, though she used a platform

that she owed wholly to her husband, enlarged the customarily dutiful role of First Lady.

■ In the Cabinet, Carla Hills took command of the Department of Housing and Urban Development, the third woman to serve in the Cabinet (after F.D.R.'s Labor Secretary Frances Perkins and Dwight Eisenhower's HEW Secretary Oveta Culp Hobby).

■ In the statehouse, Connecticut's Ella Grasso took office as the first woman Governor elected in her own right.

■ In the Congress, Texas' Barbara Jordan emerged as a rising star in the House of Representatives and the Democratic Party.

■ In the law, Susie Sharp of North Carolina served with distinction as the first woman to be popularly elected chief justice of a state supreme court.

■ In education, Jill Ker Conway was named the first woman president of Smith, the nation's largest women's liberal arts college (2,468 students).

■ In sports, Billie Jean King, who almost singlehandedly has put women into the mainstream and helped greatly to raise the pay of women athletes, became a kind of business and sports conglomerate.

■ In literature, Susan Brownmiller made a scholarly, disturbing contribution to the discussion of the sexes with her much-bruited book *Against Our Will: Men, Women and Rape*.

■ In labor, Addie Wyatt, women's affairs director of the 550,000 member Amalgamated Meat Cutters and Butcher Workmen, fought successfully to eliminate wage differentials between men and women workers.

■ In the military, Kathleen Byerly, a Navy lieutenant commander who is one of the many fast-rising women executives in the armed forces, became a top aide to the fleet's Pacific training commands.

■ In journalism, Carol Sutton, the first woman to be managing editor of a major U.S. newspaper, brightened the editorial content while she successfully ran the Louisville *Courier-Journal*, one of the nation's best dailies.

■ In religion, Alison Cheek, first woman to celebrate Communion at a U.S. Episcopal church, was hired as a priest at Washington's Church of St. Stephen and the Incarnation.

The backgrounds, achievements and views of these women are amply detailed. Scores of others might be added to the list–distinguished lawyers, economists, business executives, actresses, writers. For example, Economist Alice Rivlin, chief of the new Congressional Budget Office, has taken on the tough job of analyzing for Senators and Congressmen just how their legislation will probably affect national spending, budget deficits, prices and employment. Sarah Caldwell, the formidable director of the Opera Company of Boston, week after next will become the first woman to conduct at the New York Metropolitan Opera (TIME, Nov. 10). Journalist Charlotte Curtis wields powerful political influence as editor of the New York *Times* Op-Ed page. NBC-TV's Barbara Walters, co-host of the *Today* show, is one of the best interviewers in journalism. Joan Ganz Cooney, who launched *Sesame Street* in 1969, now presides over the Children's Television Workshop, is a member of the media-monitoring National News Council and a director of Xerox and the First Pennsylvania Corp.

What was exceptional in the year of American women was the status of the everyday, usually anonymous woman, who moved into the mainstream of jobs, ideas and policymaking. The mood was summed up by Lawyer Jill Ruckelshaus, the Administration's leading feminist, who is head of the U.S. International Women's Year Commission. Said she: "The women's movement is burning."

Despite the scope and maturity of the movement–and in some ways, because of it–women suffered a number of setbacks in 1975. The organized women's movement fell into factional disputes. The National Organization for Women designated Oct. 29 as "Alice Doesn't" Day and called on women to stage a no-work strike; it was a spectacular failure. Betty Friedan, a godmother of feminism, joined twelve other current and former NOW members in a splinter group called Womensurge, arguing that NOW is growing too radical and alienating the masses of American women. The dissidents were especially disturbed that last October NOW pledged to make lesbian rights a priority issue.

There were legal defeats. To feminists, the most startling and discouraging setbacks came when both New Jersey and New York voters rejected state equal-rights amendments. Meantime, the national Equal Rights Amendment to the Constitution remained stalled, with four states still needed for ratification.

Yet the problems of the ERA could not be entirely interpreted as a rebuke to women's rights. The sweeping simplicity of the amendment–"Equality of rights under law shall not be denied or abridged on account of sex"–made many voters, especially women, nervous. The anti-ERA lobby, led by Phyllis Schlafly–a conspicuously liberated woman who at 51 is working for a law degree–conjured up the prospect of unisex public toilets, an end to alimony, women forced into duty as combat soldiers. In fact, the effects of the ERA are not known, and some constitutional lawyers argue that it would be better to rely on specific antidiscrimination laws rather than on an amendment that might have unpredictable social results.

Far more important than such setbacks was the psychological momentum that gathered force and made many changes in everyday life in 1975. Says Connie Birmingham, an aide to U.S. Senator Richard Clark of Iowa: "Ten years ago, the thing to do at a party was for the women and the men to break up into groups. Well, they still do that, but instead of talking about toilet training and where they get their hair done, women are talking about feminism. They discuss what they are *doing*, and it is definitely more interesting, even more interesting than the men." Her view of women ten years ago may be partly caricature, but the sense of change is real.

Mothers' mind-sets have altered about their children, especially their daughters. Says Kathy Snell, 25, an Illinois farm wife, speaking of her four-year-old daughter: "I hope she doesn't spend her whole life learning how to please people. I spent so much of

Feminist marchers demonstrating in New York.

my energy making people like me that it took 23 years to like myself. I want my daughter to be independent."

More and more older women are now finding lives of their own once their children are grown–if not before. Says Sue Shear, 57, who was elected to the Missouri state legislature in 1972: "I used to feel guilty when Harry went into the jungle, and I was a

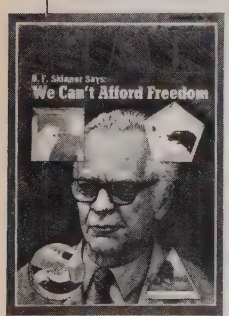
cook and chauffeur for the kids. I felt he was doing everything, and I was doing nothing. Now I'm finding that the jungle is not any harder or scarier than being home."

But it is particularly among young women that the psychological changes have taken hold. Carol Driver, 38, a twice-divorced Portland, Ore., woman who runs her own building maintenance service, detects the shifts in her teenage girls. Says she: "They don't view marriage as an automatic end. They are much more aware of possible alternatives, to marry or not marry, have children or not. We never used to question the inevitable marriage-and-motherhood route."

Protest, 1970

It is the young who seem most likely to overcome the psychological handicaps under which many women labor. In a classic study eleven years ago, Psychologist Matina Horner, now president of Radcliffe College, concluded that as a result of their childhood training and various social pressures of home and family, many women are hobbled by a fear of success–a learned fear that the risks of succeeding are "loss of femininity," loss of womanly identity. The "fear" is also quite practical–in the face of expected discrimination, a woman may decide that the effort to succeed is not worth it.

Margaret Hennig and Anne Jardim, co-directors of the Simmons College graduate program in management, believe women's attitudes toward work are so different from men's that it is not surprising so few have risen to the top in many fields. Women, they have found, often view a job as something to be done competently and carefully. Indeed, women not uncommonly are such perfectionists that they get bogged down in detail. Females have been (or at least used to be) shaped by society to have no broad perspective of career, whereas men go after long-range goals and set priorities.



Skinner, 1971

"When a woman achieves," says Jardim, "the clear inference is that her home and family suffer. So it becomes a horrid psychological trick." But this happens only as long as the woman's feminine identity remains fundamentally rooted in marriage and home. As attitudes toward women's roles change, and especially as the young grow up with more expansive and varied expectations, that kind of crippling guilt will recede.

Men's attitudes are shifting along with women's. The Harris survey found that 59% of men advocated greater opportunities for women. In some ways, the recession brought a kind of enforced enlightenment: husbands badly needed their wives'–or daughters'–paychecks to help support the family. Many men may still ask their oafish versions of Freud's infuriating question, "What does woman want?" But a surprising number of them have–guiltily perhaps–acknowledged the seriousness of women's complaints. While some advances have come because of women's push for equality or from affirmative-action programs, others have also resulted from a dawning recognition of the justice of women's demands for equal rights.

In almost all areas–business, the professions, blue-collar work, education, politics, the family–a new sensibility among both men and women has led to more enlightenment–and a restless understanding of how far away sexual equality remains.

Snippets

Short articles and excerpts from TIME's coverage of psychology through the 1970s

January 12, 1970

The article was titled "A Freudian Affair." It not only detailed some revealing aspects of Sigmund Freud's own sex life; but it also provided an insider's view of the split between Master Freud and Student Carl Jung.

According to his anointed biographer, Ernest Jones, Freud was "quite peculiarly monogamous." The truth, says Psychologist John M. Billinsky, 59, contradicts that judgment: during his marriage, Freud conducted a passionate affair with his wife's younger sister, Minna Bernays, a large, imperious and imposing woman who lived with the Freuds for over 40 years. In the current issue of the *Andover Newton Quarterly*, published by the theological institution outside Boston where Billinsky is a professor, the author adds this humanizing revelation to the history of the founder of modern psychoanalysis.

Reason for Parting. A perfervid disciple of Carl Jung, who was one of several Freudian disciples to rebel against the master's tutelage, Billinsky introduced his footnote not to illuminate Freud but to correct the official record on Jung's apostasy.

Image Repaired. By then, the master had begun to suspect that his leading disciple was eager to assume the mantle of successor. That knowledge may have helped widen the breach between them. But the parting came for another reason. "It was my knowledge of Freud's triangle that became a very important factor in my break," Jung told Billinsky. "And then I could not accept Freud's placing authority above the truth. This too led to further problems in our relationship. In retrospect, it looks like it was destined that our relationship should end that way."

March 2, 1970

For some reason, "aversion therapy" stories seem to show up in the pages of TIME with amazing regularity. The following is the complete article, titled "Kicking the Smoking Habit."

A characteristic common to many habitual cigarette smokers is that they would like to stop but can't. A recent experiment at London's Maudsley Hospital by Psychiatrist M.A. Hamilton Russell suggests that the tobacco smoker can be literally shocked out of his habit. To a sample group of 14 heavy smokers, Russell administered electric jolts at some point during the smoking process. The results were as electrifying as the treatment. After an average of eleven sessions, nine of the 14 had given up smoking; three later relapsed into the habit, but six were still off cigarettes at the end of one year.

Russell's experiment is another application of what psychologists call aversion therapy. It has been tried, with limited success, on homosexuals, alcoholics and drug addicts–though in all cases the treatment is extremely unpleasant. A heroin addict, for instance, is given a drug (Scoline) that seriously impairs his ability to breathe. Just before the drug takes effect, he gets his usual dose of heroin. After several such harrowing experiences, he presumably kicks the habit.

Because Psychiatrist Russell limited his study to only 14 heavy smokers, its results cannot be considered conclusive. Moreover, Russell recommends the treatment only for those with a strong desire to stop. "Depression," he says in his laconic

report on the experiment, "was the most troublesome side effect"–one that affected more than half of his subjects. One of his subjects, in fact, fell into such a suicidal funk at being electrically deprived of the urge to smoke that Russell sensibly dismissed her from the course.

February 15, 1971

It sometimes seems that there never will be an end to a call for "more research on the effects of smoking marijuana" before the scientific community will–once and for all–issue some final judgment. This article summarizes a report of the National Institute of Mental Health that seems considerably more favorable than more recent ones.

In the continuing debate over the effects of pot, the heads appeared last week to have gained a slight edge over the straights. Issuing a summary of current scientific knowledge about marijuana, the National Institute of Mental Health asserted that for most people the drug "does not seem harmful." But the institute cautioned that information about marijuana–especially about its long-term effects–is still fragmentary and that final judgments await more research.

Meanwhile, NIMH reported some interim findings:

- There is no evidence that marijuana affects unborn children.
- Use of the drug is sometimes associated with "minor asocial or antisocial behavior," but not with major crime.
- Use may precipitate psychosis in perhaps one out of 300 cases, but only in "those who were about to crack anyway." Attacks of anxiety occur in a small percentage of cases, but the panic is transitory: it disappears when the victim is assured that nothing is seriously wrong with him.
- Although heavy use sometimes is associated with an "amotivational syndrome"–loss of interest in conventional goals–there is no present evidence that the drug causes the syndrome. Indeed, there is the possibility that the syndrome causes the drug use; those without conventional motivation may find drugs especially attractive.
- There is little evidence of progression from marijuana to hard drugs.

Underscoring the need for more facts about pot, NIMH reported that use has increased rapidly in the past few years. In a survey of 10,000 students at 50 colleges, Dr. Peter H. Rossi of Johns Hopkins University found that 31% had tried marijuana at least once, and 14% were using it "every week or two." By contrast, a 1969 Gallup poll showed that 9% of college-trained people had experimented with the drug.

NIMH reported, however, that in California, which was first to experience "the onslaught of drugs," marijuana use may well have "crested." In San Mateo County, for example, seventh- and eighth-graders smoked less pot in 1970 than in 1969. Dr. Bertram Brown, director of NIMH, believes that the decline may well presage similar decreases in marijuana use elsewhere in the next few years.

Inconclusive though it is, the NIMH report will provide a starting point for the commission appointed by President Nixon. A 13-member panel of doctors, educators and Congressmen, headed by Pennsylvania's former Republican Governor Raymond Shafer, will make a two-year study of the use and effects of marijuana and then try to answer one of the most sensitive questions now before Congress: Should pot be legalized?

March 15, 1971

Sex before the big game? Here is the wisdom of the experts: Joe Namath (football star), William Masters (sex researcher) and Robert Harper (psychologist).

"I went out and grabbed this girl and brought her back to the hotel, and we had a good time the whole night. It's good for you. It loosens you up good for the game." That appraisal of sex before sport–an activity frowned upon by many coaches–was made two years ago by Quarterback Joe Namath as he described the eve of the 1969 Super Bowl. Namath, a well-known lover on and off the screen and a player whose spectacular performance on the field seemed to prove his premise, had no scientific support to back him up. Now that support has been supplied by St. Louis Sex Researcher William Masters and Washington Psychologist Robert Harper.

Although the scientists, in conversations reported by the newsletter *Behavior Today*, stopped short of saying that sex is good for players, they insisted that it can have no bad effects. Told that Baltimore Colts Coach Don McCafferty had ordered players' wives to stay away from training camp before this year's Super Bowl, Masters could see no physiological reason for the ban. Sex, he said, takes only as much energy as running 50 yards. With enough sleep, he said, "I can't imagine a morning-after effect for a conditioned athlete."

July 19, 1971

In the mind-expanding, consciousness-raising days of the early 1970s, there was great hope and promise for biofeedback and alpha training. The hope and promise alluded to in this article (titled "Alpha Wave of the Future") have not materialized. Biofeedback seems to have found something of a niche in therapy, but even now many of the claims for its success do not go unchallenged.

Alone in a semidarkened room, a young woman relaxed in an armchair before a blank screen, three electrodes fixed to her scalp and one grounded to an earlobe. Suddenly a pale blue light flickered on the screen and then steadied: a voice said quietly: "That's alpha."

The voice was that of neurophysiologist Barbara Brown of the Veterans Administration Hospital in Sepulveda, Calif. She was demonstrating "biofeedback training," a new way of teaching human beings to control the kind of waves their brains emit–in this case, a rhythm called alpha, which usually accompanies a mood of relaxed alertness.

It was only in 1929 that German Psychiatrist Hans Berger discovered alpha waves and not until 1958 that experimenters began working with alpha training. A tone or light activated by the EEG tells a trainee when he is producing alpha. Asked to keep the feedback (the tone or light) steady, most people can comply simply by relaxing.

If the system works as well as current research suggests, it may prove a boon for psychology, psychiatry, education and even industry. Already it has spawned a pop-alpha cult of profit-seeking train ers and fervent devotees in search of instant Zen.

Nixon, 1973

But research is too new for anyone to claim that alpha training is a shortcut to nirvana. Electronic yoga remains a faddist's dream.

August 9, 1971

The meeting of the International Psychoanalytic Association in 1971 caught the attention of TIME. The major agenda item at the meeting was aggression. Two headliners in attendance were Anna Freud and Erik Erikson.

Although Sigmund Freud conceived his theories of psychoanalysis in Vienna and founded his movement there, the city still has few Freudian analysts. So last week, when the International Psycho-Analytic Association convened its biennial congress in Vienna for the first time, there was little more than a corporal's guard of 26 resident analysts to greet the more than 2,000 visiting delegates.

Overshadowing the occasion was Anna Freud, 75, youngest of Freud's offspring. To analyst Anna, Vienna was no waltzing *City of My Dreams* but a city of nightmares; after she and her father were driven from it by the Nazis in 1938, she vowed never to return. Now she had relented, but maintained an austere aloofness as the visiting analysts, plus wives and children, trooped through Freud's one-time consulting rooms in the house where she was born on the Berggasse. But when the city's deputy mayor burbled that "all Vienna appreciates your coming here," Anna melted. "I am greatly pleased and deeply moved," she said.

Women's Rights, 1977

No less eminent an insider than Harvard Professor Erik Erikson... His white mane looking like a halo, Erikson warned the congress against an abstract use of the term aggression and accused the delegates of treating the topic too theoretically. He asked that it no longer be discussed in "decades-old formulations."

At the congress's end, Anna Freud summed up. She tried to smooth over previous speakers' differences and conceded that analysts still had a "clouded vision" on aggression. Then, sounding like a reincarnation of her father, she added: "But who should arrive at valid results if not we?" Everybody applauded. But nothing had really been settled. Psychoanalysis, which has survived two great schisms provoked by Jung and Adler, seemed headed for a new and challenging schism.

Carter, 1979

August 16, 1971

For some reason, sleep-learning is an issue that will not go away. We would all like to think it possible to learn large amounts of information while sound asleep–how easy, how effortless! Hence, any indication that learning while asleep may be possible is news (even if one doesn't learn very much!). This item carried the title "You Will Remember Forever."

For years sleep researchers have suspected–in the face of considerable doubt–that learning during slumber is a possibility. Now scientists have come up with what they believe to be the first clear-cut evidence that such effortless learning can take place.

Experimenting with 20 high school and college students who had never studied Russian, Psychologists C. Michael Levy and Wilse B. Webb of the University of Florida undertook to teach them six Russian nouns and their English meanings. For two nights, just before the students dropped off to sleep, they heard a "conditioning tape" that assured them they would learn while they slept if they were willing to do so. For the next five nights, when they had fallen asleep, the students heard a recording of the paired nouns after a taped voice identified as that of "your Russian teacher" promised that "you will remember these words and their meanings forever." The results: a recall rate that ranged from 10% when the tapes were played early in the night to 30% when they were played toward morning.

February 28, 1972

The title of this article, quoted here in full, is "Snowmobile Psychology."

This winter, there are 1.4 million snowmobiles abroad in the land, and the number is growing fast. Nature lovers, insisting that the little vehicles cause damage to the environment and shatter the tranquillity of wilderness regions, have begun pressing for anti-snowmobile legislation. But prospects for effective regulation are poor; the likelihood of an outright ban is nil. Now, however, a study by a Michigan State University professor suggests a more subtle way to deal with the proliferation of the abominable snowmobile (as its foes call it). If it is made thoroughly safe to operate, devotees will get bored and look for something more exciting.

Social Science Professor David Klein has not actually made that proposal, but in a recent issue of the *Journal of Safety Research*, he makes a sweeping generalization about snowmobile enthusiasts: they court danger to achieve satisfactions that their dull jobs cannot provide. The problem, Klein theorizes, stems from the discrepancy between cultural values and reality. The derring-do that had survival value in frontier days is still extolled in the U.S.: yet it is obsolete. In an industrialized nation where most jobs are routine, a man cannot win status through on-the-job valor. To compensate, he surrounds himself with power tools, outboard motors, high-performance cars, snowmobiles and the like. These give him, at play, "the feeling of control, power, masculinity and risk no longer available at work."

So great is the need to live dangerously, Klein believes, that most efforts to promote safety are doomed to failure: "Americans do not want as safe an environment as could be achieved. If an individual seeks risks, incorporation of safeguards into a recreational device is likely to send him in search of a less safe device."

February 26, 1973

The report of this research is filled with problems (for example, the footnoted definition of "mean"). If it were not for the interesting sex differences reported (on the basis of results from a total of only 48 men and women), the article, titled "Older and Wiser," probably would not have appeared.

From the moment of birth the average human being loses brain cells. They die at a rate that can accelerate to as many as 100,000 per day by age 60, and unlike other cells they are not replaced. That dismaying loss would seem to ensure a substantial decline in mental capacity by middle age. But Psychologist Jon Kangas, director of the University of Santa Clara Counseling Center, believes that despite the diminishing number of brain cells, IQ may actually increase with age. In a recent study, Kangas found that the IQs of 48 men and women in the San Fransisco Bay area went up about 20 points between childhood and early middle age.

First tested as preschoolers, members of the group had a mean* IQ of 110.7. This rose to 113.3 ten years later and to 124.1 after another 15 years. By the time the subjects were in the 39-to-44 age group, their mean IQ was 130.1.

Kangas found an unexpected variation between IQ changes in men and women: among men, those with the highest IQs as children showed the greatest increase in IQ scores as adults. But among women, those who were brightest as youngsters made the smallest gains in adulthood. Most of the female subjects were housewives or held undemanding jobs, while all

of the males had stimulating careers. For this reason, Kangas attributes the male-female IQ differences to his subjects' jobs–or lack of them. Though he admits that he cannot prove it, he theorizes that performing menial tasks may not only bore some women, but may even hold them back intellectually.

*Half scored higher, the other half lower.

December 6, 1976

The scandal over Cyril Burt's data just came to light in late 1976. The final paragraph is a particularly noteworthy piece of editorializing.

The late British psychologist Cyril Burt was eminent in his profession: he held the psychology chair at London's University College, was knighted by King George VI and won the Thorndike award from the American Psychological Association. As a government adviser, he helped restructure the British educational system in the 1940s. Now, five years after his death, Burt is the object of a growing scandal. He has been accused of doctoring data and signing the names of others to reports that he wrote.

Much of Burt's reputation rested on his prominent role in the debate about heredity and intelligence. His studies of identical twins who grew up apart indicated that heredity– rather than environment–explains most of the differences in IQ scores. But shortly before Burt's death in 1971 at the age of 88, there were academic murmurs that the psychologist's data were suspect. For one thing, the statistical correlation between IQ scores of his identical twins remained the same to the third place after the decimal point as more and more twins were studied–an extraordinary and highly unlikely coincidence. Yet most experts assumed it was an honest and unimportant mistake. "As he got old," said British Psychologist G. C. Drew, "he was remembering old figures that got stuck in his mind."

At best, Burt's methods were incredibly sloppy. The raw test sheets on the twin studies were among papers stuffed into half a dozen tea chests and later destroyed.

It is also a mess for the entire field of psychology, which is struggling to be taken seriously as a rigorous science. When a leader in the field is shown to be either a fraud or spectacularly inept, it is psychology's loss.

August 8, 1977

Another major name in the nature-nurture controversy with regard to intelligence is that of Arthur Jensen. Jensen shook the academic community with his 1969 article on the inheritability of intelligence in blacks and whites. This short article is titled "A Second Opinion from Jensen."

Psychologist Arthur Jensen is not widely admired among liberal intellectuals. Last winter a number of prominent professors, including Anthropologist Margaret Mead, displayed some remarkably illiberal behavior by protesting Jensen's election as a fellow of the American Association for the Advancement of Science. The reason: he believes heredity accounts for most of the difference in average IQ scores between blacks and whites.

Jensen's now famous–or notorious–article appeared in a 1969 issue of the *Harvard Educational Review* under the title "How Much Can We Boost IQ and Scholastic Achievement?" His answer: Not much. His own later study of black and white children in Berkeley (where he teaches at the University of California) confirmed his conclusion that IQ scores are 60% to 90% determined by genetics. IQ tests show blacks in the U.S. scoring, on the average, 15 points lower than whites.

Now, however, Jensen has produced an IQ study to delight his critics. As reported in the journal *Developmental Psychology*, Jensen studied 1,479 children, both black and white, in a dirt-poor town in southeastern Georgia. He compared the scores of pairs of siblings in order to test the thesis that environmental factors can produce a decline in IQ scores. His finding: unlike the blacks in relatively affluent Berkeley, whose IQs remained stable with increasing age, the rural Georgia blacks on the average showed a decrease of one IQ point each year between ages five and 18. There was no significant decrease with age in the scores of whites, who were generally from less impoverished families.

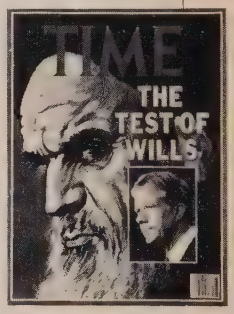
Though Jensen does not believe these results undermine his genetic theory, he thinks it proves the case for some environmental damage to black children. Says he: "You have to conclude that something is happening to those kids while they are growing up." Jensen, in fact, claims he has done a better job proving environmental damage than the environmentalists themselves. Says he: "This is one of the first rigorous studies of IQ deficit. The environmentalists just took it for granted. They never did a really careful study."

Many of Jensen's critics believe he has only discovered the obvious. But they are pleased because they think the study will discourage the political use of Jensen's work by racists. "It is an interesting methodology, though not an important contribution to knowledge," says Harvard Psychologist Jerome Kagan, a dyed-in-the-wool environmentalist. "But from a political point of view it's probably important. For Jensen to say this has political implications that are good and positive."

December 25, 1978

Notice how the first line refers to the late '70s as an "era of sexual emancipation." The theme of the item, titled, "Parental Line: Same old birds and bees," is how parents explain the "facts of life" to their children. What an interesting topic for publication on the week before Christmas!

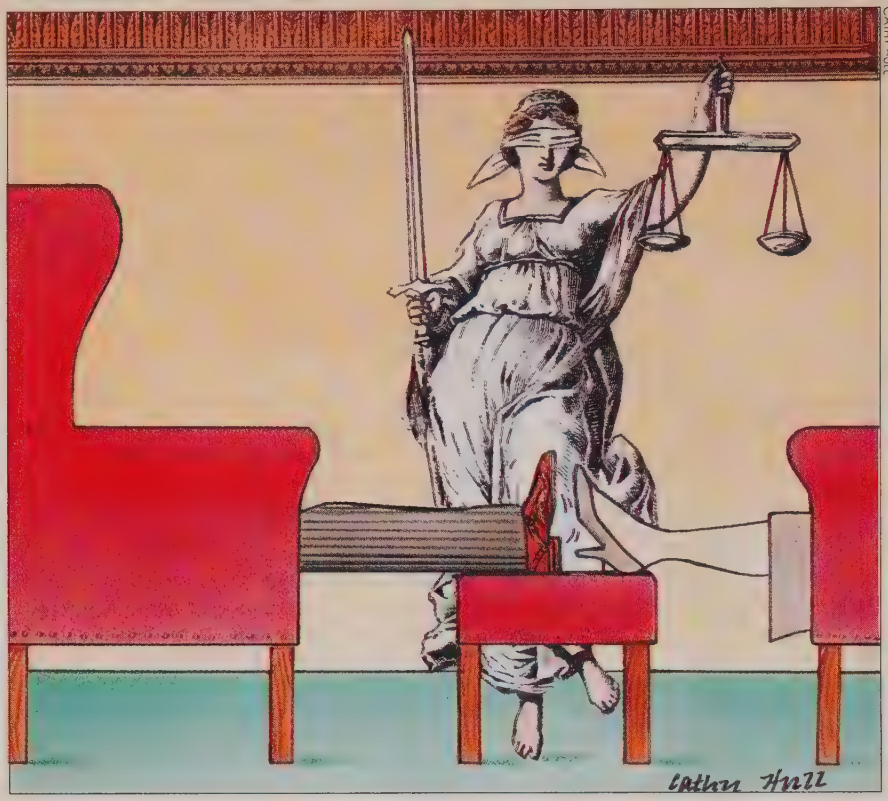
In this era of sexual emancipation are parents as uptight as of yore in discussing sex with their kids? Yes, indeed. That at least was the word last week from a Kinsey-type study called *Family Life and Sexual Learning*, prepared by the Project on Human Sexual Development. The researchers spent three years probing the attitudes of 1,400 mostly young Cleveland parents and concluded that they are as reticent in talking about sex as their parents were. The report's highlights:



Hostage Crisis, 1979

- Some 85% to 95% of parents say they have never mentioned any aspect of erotic behavior or its consequences to their offspring.
- Parents who do talk about sex with their children think that one chat is enough.
- Parents worry about masturbation, especially fathers because they fear that it will lead their sons to homosexuality.
- Blacks have almost exactly the same views on sex education as whites, except that they are more likely to bring the subject up with their youngsters.
- Both mothers and fathers are about twice as likely to approve premarital sex for sons as for daughters.

Conclude the researchers: "In word and action, the Cleveland parents generally seem to be repeating a pattern set before them by their parents that includes little, if any, verbal communication about sexuality." Emancipation or not, it's apparently the same old birds and bees.



The 1980s

Piaget's impact; insanity plea challenged; Skinner speaks out; TV and aggression; anxiety disorders widespread

The early '80s welcomed Reagan to the White House, the hostages home, Diana to the Family and Andropov to the Kremlin. It was the start of a decade characterized by crisis and revelation that checked the collective directions of the nation and the world. The President, the Pope and John Lennon were targets of a wave of senseless violence, leaving Americans doubly disillusioned during the longest recession since the 1930s. Mt. St. Helens overflowed, and the *Challenger* went up in smoke. Chernobyl suffered a massive meltdown. Western Europe was beset by terrorism. Apartheid weighed heavy on the people of South Africa. Around the world, the visions of the women's movement were realized in the milestone strides of Sandra Day O'Connor, Margaret Thatcher, Geraldine Ferraro and Cory Aquino, while Jim and Tammy Bakker, Gary Hart, Ivan Boesky, Ollie North, Jimmy Swaggart and Leona Helmsley tested the moral structure of America in a sudden ethical upheaval that shook the nation. Now the threat of AIDS, the shock of the Crash and the promise of the INF treaty have left us poised at the close of Reagan's Administration on the prospects of the coming term.

September 29, 1980

The obituaries of many famous psychologists and psychiatrists appeared in the pages of TIME during the 1980s. One of the most noteworthy was Jean Piaget. TIME had consistently presented Piaget's views over the years. Now with his death in 1980, it prepared a full-page obituary.

From Mollusks to Moppets. At age ten he wrote and published a monograph on a rare, part-albino sparrow. Later he developed an interest in mollusks and wrote so many articles on the subject that he was offered, sight unseen, the job of curator of the mollusk collection at the museum in his native Geneva–an offer he had to turn down because he was still in high school.

Jean Piaget had indeed started academic life on a fast track. He won a Ph.D. in biology at 22, flirted with a career in psychoanalysis, and at 24 began his pioneering studies on the development of intelligence in children. "I was haunted," he said later, "by the idea of discovering a sort of embryology of intelligence." By the time he was 30 those studies had won him acclaim throughout Europe. Though acceptance in the U.S. and many other countries came late and grudgingly, when he died last week at 84 Piaget was hailed as one of the great psychologists of his age. Said Harvard Psychologist Jerome Kagan: "He was the most influential development theorist of this century, if not of all time."

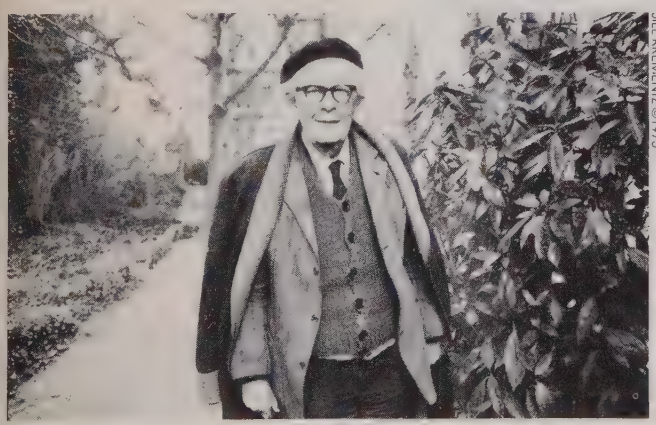
Unlike Freud, Piaget had no taste for grand theories or empire building. Nor did he have any zest for the cut and thrust of academic infighting. He was, in fact, a rather reserved, quiet personality, a familiar, fatherly figure trudging or bicycling along the streets of Geneva, wearing his blue beret and smoking a

meerschaum pipe, eyes aglaze as he picked his way through his latest intellectual problem. He was not much interested in fame, polemics or small talk.

Though he could be remote and cold with adults, he had a remarkable empathy with children. For nearly 60 years he studied them as closely as he once studied mollusks, ferreting out their notions of time, space, numbers and ethics as he sprawled on the ground shooting marbles and playing other games with them. Out of these observations came his challenge to prevailing wisdom about child development. One of his conclusions: "Children not only reasoned differently from adults, but also they had quite different world views, literally different philosophies."

Piaget found that toddlers think like primitive people. The very young believe that the moon follows them when they go for a walk, that dreams come in through the window at night, and that all moving things, including ocean waves and fluttering flags, are obviously alive. The young child's notion of justice is also primitive, taking into account only the damage done and not the intentions of the offender. For example, a child who breaks three teacups while helping Mother clear the table considers himself more culpable than a child who smashes one teacup in a fit of rage. The clash between the child's objective morality and the parent's subjective one, according to Piaget, is at the heart of much parent-child conflict.

Despite his contributions to both fields, Piaget did not consider himself a psychologist or educator, but a "genetic epistemologist"–a biologist-philosopher asking the question: How does the human organism learn? His answer: partly by nature, partly by nurture. By that, Piaget meant that the child is somehow programmed to master logical thought in predictable developmental stages. But, he added, development depends on vigorous interaction with the environment. Thus learning is not something poured into a child; it is something a child helps create through his or her own activity. One example: until age five or six, most children think that six pennies stacked up are quantitatively less than when they are spread in a row. By age seven or eight, almost all children understand that the number of pennies does not change, no matter how they are arranged. The child may have the innate ability to comprehend this new mental picture, but



JILL KREMENTZ ©1973

Jean Piaget at his home in Geneva, March 1973

They have different world views, different ways of reasoning.

he only learns it through action.

Indeed, in Piaget's view, all experience is organized by intelligence. Every child, he said, constructs and constantly revises his very own model of reality, and does so in a regular sequence. Piaget outlined four stages of mental growth. In the first two years, he is preoccupied with symbols, in language, dreams and fantasy. From age six or seven to about twelve, the child moves on into the abstract, mastering numbers and relationships and how to reason about them. Finally, from age twelve to 15, the youngster tackles purely logical thought and can think about his own thinking and that of others. For the first time, he can understand double messages–irony, double entendre and the resonance of aphorisms.

Though his ideas stressed inborn processes during learning, Piaget called himself "the man in the middle" on the nature-nurture debate. In the U.S. especially, the prevailing intellectual fashion for years was emphatically pro-nurture: environment shapes the person, not heredity, and there are no instincts or other inherent structures. As a result, Piaget was cold-shouldered in many sections of American academia as late as the 1960s. Since then, his work, as well as that of such scholars as Anthropologist Claude Lévi-Strauss and Linguist Noam Chomsky, helped persuade skeptics that some form of innate mental structures exists, and the nature side of the argument has gained new respectability.

One common criticism of Piaget is that his work does not lead to any clear vision of how to educate children. Two of his conclusions, however, are clear enough: 1) motivation and rewards are not necessary–the structures in the child's mind lead to a kind of spontaneous development, and 2) the teacher plays a limited role. For Piaget, the child is the real educator, not the teacher.

July 5, 1982

John Hinckley shot the President of the United States and three other men. Of that, everyone was sure. We had seen the shooting replayed on television dozens of times. Hinckley's lawyers contended that their client was insane at the time of the shooting, and therefore should not be held accountable for his actions. In the following article, a stunning verdict puts the insanity defense on trial.

Is the System Guilty? The Hinckley case may be the most expensive and significant in the history of the insanity defense. The quirkiness of the law and weeks of conflicting psychiatric testimony struck many as an affront to common sense. Indeed, by the time John W. Hinckley Jr. was taken off to St. Elizabeths Hospital, it seemed that the insanity defense itself had been on trial–and found guilty. Says Geoffrey Alpert, a sociologist of law at the University of Miami: "The verdict is the best thing that ever happened to the insanity plea because I think in the long run it's going to be abolished . . . we're going to get rid of it."

That was probably overstating things a bit. The insanity defense still has strong proponents, not to mention an entrenched place in Anglo-Saxon law and morality. "Why the outrage?" asks Detroit Psychiatrist Emanuel Tanay. "If Hinckley had been killed, everyone would be saying, 'That was the act of a deranged, sick man.' We need the insanity defense so we can say we are a civilized society and we don't execute sick people."

Since the 14th century, English common law has excused offenders who were mentally unable to control their conduct. In 1843 Daniel M'Naghten, a schizophrenic, tried to shoot Prime Minister Robert Peel and killed Peel's secretary in the attempt. A jury acquitted M'Naghten as insane, touching off a national furor similar to the one that has followed the Hinckley verdict. The M'Naghten rule, adopted by most U.S. courts, declared that a defendant was not culpable if he "was laboring under such a defect of reason, from disease of the mind, as not to know the nature and quality of the act he was doing; or, if he did know it, that he did not know he was doing what was wrong." Over the years, on grounds that the rule deals only with knowledge and not emotion, some states added "irresistible impulse" as another reason for acquittal.

In the 1950s, the high-water mark of Freudian influence in America, many jurists came to believe that psychiatry could offer a clean and accurate guideline to the limits of responsibility. Prodded by psychiatrists, Judge David Bazelon, of the Court of

Appeals for the District of Columbia, produced a vague standard in *Durham vs. United States* (1954): an accused is blameless if the crime was "the product of mental disease or mental defect." Psychiatrist Karl Menninger hailed the ruling as "more revolutionary in its total effect than the Supreme Court decision regarding segregation." But "mental disease or mental defect" was broad enough to cover drug addiction, alcoholism and conceivably even heartburn, all then listed as disorders by the American Psychiatric Association. Most states declined to adopt the *Durham* rule.

Ten years ago, a nine-judge federal panel, including a chastened Bazelon, overturned *Durham* and insisted that defendants must be substantially confused or unable to control themselves in order to prove insanity. Today 26 states use a version of that "substantial capacity" rule, 22 use M'Naghten and two–Idaho and Montana–have abolished insanity pleas.

Psychiatric testimony does not seem to fit well into adversary proceedings. As a branch of medicine, psychiatry is concerned with sickness and health, not with right and wrong, the language of law. Carefully nuanced diagnoses tend to be made more clear-cut or pushed to extremes. Says Cleveland Psychologist Garland De Nelsky: "Rather than unbiased discussion, which is needed, we hear exaggerated arguments between mental health specialists who desperately want to 'win.'" To Alan Stone, professor of law and psychiatry at Harvard, the sight of competing psychiatrists testifying for and against a defense of insanity is like "clowns performing in a three-ring circus."

The either-or nature of insanity trials bothers psychiatrists. Explains Ernest Prelinger, a professor of psychology at Yale: "We now think in terms of continuums, of gradual transitions of things, while the law thinks in terms of sharp transitions." The mind can comfortably hold opposites, say love and hate for the same person, and many deeply disturbed people are able to retain a sense of moral responsibility. Says Bernard Diamond, a psychiatrist at the University of California at Berkeley: "No matter how mentally ill you are, you're probably responsible to some degree." Charles Ford, professor of psychiatry at Vanderbilt University, says that psychiatrists should offer medical diagnoses and interpret signs of mental illness but not give legal judgments. When it comes to "determining if a person knows right from wrong or is morally capable," Ford says, "I don't think we have any special skills."

Another problem is that Freudianism, the basic theory of psychiatry, sees all humans as shaped and determined by psychic forces, to the point where many psychiatrists think that just about everyone is a bit mentally ill. Says Columbia University Psychiatrist Willard Gaylin: "What's happened is we've moved to a broader and broader definition of mental illness, and the law can't tolerate that. The law and psychiatry have been on a collision course for the last 50 years."

Indeed, psychiatry and the law now resemble a couple that is splitting after a long marriage. Says Stone: "People are saying, 'What could they have possibly seen in each other? They are so different. He, the law, is so formal, rigid and traditional. She, psychiatry, is so flighty, expansive and unconventional. His style is objective and judgmental. Her style is subjective and understanding.'"

The insanity plea is invoked roughly once in 1,000 cases, but it seems more common because it crops up in sensational trials. Says Sociologist Alpert: "If you shoot someone with a bullet, you're not going to use the insanity defense. But if you empty a gun into him and then beat him over the head with a sledgehammer, you are more likely to be ruled insane." A New York State study found that those who successfully used insanity pleas included a disproportionately high number of older people, whites and females.

AP

John Hinckley Jr. with federal marshals

Two men who attacked Presidents used the insanity defense successfully: Richard Lawrence, the house painter who shot at Andrew Jackson in 1835, and John Schrank, the saloonkeeper who shot former President Teddy Roosevelt in 1912. The most prominent American to plead insanity was Poet Ezra Pound, who did so to avoid going on trial for 19 counts of treason for his pro-Fascist radio broadcasts from Italy during World War II. He was sent to St. Elizabeths, Hinckley's new home, where the average stay for a criminally insane inmate is reportedly 4½ years.

For most of U.S. history, the successful insanity plea has made little practical difference; like the deranged M'Naghten, those ruled not guilty simply spent the rest of their lives in mental wards instead of prison. That changed in the 1970s with a series of rulings on the rights of mental patients. Now states cannot confine a patient against his will unless he is ruled dangerous to himself or others. This creates terrible dilemmas for psychiatrists, who are the first to admit that they cannot predict future violent behavior with any degree of certainty. When they guess wrong, the results can be heinous. Some recent examples:

■ Michael Hightower, 32, a Viet Nam veteran who raped two Idaho women and was declared not guilty of both crimes on grounds of mental illness. He was released after less than a year of treatment. Last fall he was arrested again for shooting a nurse, and convicted of assault with intent to kill. The case was the ultimate catalyst in leading Idaho to abolish the insanity plea.

■ Garrett Trapnell, 43, who was arrested 20 times but, until he was imprisoned in 1973 for hijacking a passenger jet, had spent less than two years in jail because he successfully masqueraded as insane. He is the subject of Eliot Asinof's book *The Fox Is Crazy Too*, a copy of which was found in Hinckley's possession.

■ Charles Meach, 34, who kicked to death a retarded Alaskan Indian in 1973 but escaped prison with an insanity defense. Allowed out on a work-furlough program after psychiatrists concluded his illness was in remission, Meach is now charged with slaying four teen-agers at a state park in Anchorage.

These terrible mistakes, as well as highly publicized insanity trials, have propelled reform efforts. The day after the Hinckley verdict, the Delaware legislature passed a bill allowing juries to find defendants "guilty but mentally ill." Those convicted under

the new provision–also in force in Michigan, Indiana, New Mexico, Georgia and Illinois–can be treated in mental institutions until they recover, then transferred to prisons to serve out their terms. Says Georgia Attorney General Michael Bowers: "The effect is to say that the defendant is not absolved for responsibility for criminal actions." To civil liberties specialists, that is precisely the problem: Why force a disturbed person, who has recovered, to serve out a long prison term? Howard Simon, director of the American Civil Liberties Union of Michigan, says the new category appears to have made no difference in reducing the number of insanity pleas, but may reduce treatment of disturbed convicts.

THE GRANGER COLLECTION

Daniel M'Naghten
Is everyone a bit mentally ill?

The Hinckley case focused attention on a major failing for the federal insanity law: the burden of proof rests with the government. Though no psychiatrist would ever set out to prove a fellow citizen sane beyond a reasonable doubt, the government must do just that in criminal trials. Says White House Counsellor Edwin Meese: "You couldn't even prove the White House staff sane beyond a reasonable doubt. It's a tremendous burden."

Though federal jurisdictions and a majority of states will require the prosecution to prove the defendants sane beyond a reasonable doubt, a growing number of states are shifting the burden of proof to the defense. In these instances, the standards of proof are less onerous in order to protect the defendant. In Indiana, for instance, the defendant must prove only that he is not responsible by "a preponderance of evidence," not beyond a reasonable doubt.

Some states are considering junking the insanity plea. Another alternative under discussion is "guilty with diminished responsibility," which could mean conviction for a lesser offense because of emotional disturbance. Minneapolis Psychologist David Lykken suggests keeping psychiatrists out of most legal proceedings until the sentencing; evidence of emotional impairment, like any extenuating circumstance, could reduce the sentence after a guilty verdict.

Proponents of the insanity plea are obviously hoping to ride out the storm. Says Harvard Law Professor Alan Dershowitz: "The insanity defense is a very conservative legal doctrine. It says,'Look, we're going to excuse one-tenth of 1% of the people. We're going to tell the rest of the 99.9%, you are responsible.' " That may be, but the shock waves of the Hinckley verdict may be too great to leave even a conservative doctrine alone.

October 10, 1983

Behaviorism's most outspoken supporter. Psychology's most noted writer. Burrhus Frederic Skinner has been granted much ink by TIME magazine. This short biographic piece was occasioned by the appearance of two of Skinner's books, both published when the author was 79 years old.

Still Walking Faster and Longer. *At 79, B.F. Skinner writes about old age and himself.* "I now present the devil," said Critic I.A. Richards, introducing Guest Lecturer Burrhus Frederic Skinner to his Harvard class in the late 1940s. For college students of those days, that was introduction enough. Psychologist B.F. Skinner was the double-domed egghead who had dismissed mind, feelings, religion and freedom in favor of "operant conditioning," a reward-and-punishment view of human life that was largely derived from experiments with pigeons. Clergymen and academics railed against him, and students showed up at Harvard Health Services suffering from "Natural Sciences 114 Syndrome," named for the Skinner course responsible for their emotional discombobulation.

Retired from teaching since 1974, Skinner, 79, lives quietly in a gray modern house on a dead-end street in Cambridge, Mass. Bothered by eye problems and partial loss of hearing, he still walks the two miles to his Harvard office each day with the aid of a cane. Since he stopped teaching, he has written seven books, two of them just out: *Enjoy Old Age*, co-authored with Psychologist M.E. Vaughan, and *A Matter of Consequences*, the third and final volume of his autobiography. Despite decades of controversy, Skinner remains convinced that his principles of 50 years are correct: freedom is an illusion; the behavior of men, like that of pigeons and rats, is shaped by external influences, not internal ones. To Skinner, actions that are rewarded are repeated; those discouraged are extinguished. Feelings and mental processes are just the meaningless by-products of this endless cycle of stimulus and response. Says he: "A scientific analysis doesn't have a place for the individual as the initiator of behavior." Sad to say, it does not even have a place for a famous behaviorist to be proud of his books, which are simply the results of the environment working its way with the organism. "I am willing to concede that I have committed a kind of intellectual suicide in writing this autobiography," he comments at the end of *Consequences*. By denying creativity and freedom, Skinner says, "I have relinquished all chance of being called a Great Thinker."

True to his proclaimed indifference to either metaphysics or the emotions, Skinner's *Enjoy Old Age* has little to say about loss, death or the meaning of life. It is instead a collection of sensible tips for the elderly. (Samples: hang an umbrella on a handy doorknob if rain is predicted, read pornography to extend and pep up the sex life, prepare a few tricks to amuse grandchildren when they pop over for the inevitable visit.) The key to enjoying old age, Skinner believes, is to construct the right environment: "If you can, design a world in which you are not so much bothered by defective vision and hearing, not so much bothered by forgetfulness, not so much bothered by being bored."

The autobiography is a deliberately dry collection of facts, clippings and journal entries almost totally devoid of feeling or personal assessment. "I tried to write a rather different kind of autobiography," he says. "I simply tried to recount my life as it was lived, step by step–just a series of episodes as they happened to me–and insofar as possible, I avoided interpreting it."

Skinner describes himself as a tinkerer who loves to make new gadgets. He creates the famous Skinner box by adapting a Sears, Roebuck ice chest and uses it to teach pigeons to play Ping Pong and walk in precise figure eights. During World War II he designs a missile guidance system based on the idea that pigeons placed in the noses of torpedoes and bombs could direct the missiles to targets by pecking on the electronic screens. The scheme is feasible, he insists, but the War Department is not persuaded. The younger of his two daughters, Deborah, is raised for 2½ years in Skinner's Air-Crib, a child's crib that is enclosed, soundproofed and temperature-controlled. Some members of the public accuse Skinner of monstrous experimentation with his children, but both girls grow up normally.* Horrified by the routine in Daughter Debbie's fourth-grade class, Skinner designs a primitive computer or "teaching machine" that flashes approval

when pupils insert the right answer cards in a slot.

For Skinner, all of life is a stroll through a behavioral lab. While looking at Thoroughbreds on a Kentucky horse farm, he concludes that the animals could certainly be trained to run faster with recorded crowd noises and the stimulus of a front-running simulated horse mounted on a car. At an academic symposium, Psychoanalyst Erich Fromm angrily chops the air and argues that pigeons are not people, the usual one-line refutation of Skinnerism. Skinner wonders whether he can increase Fromm's air chopping by nodding and smiling each time the psychoanalyst's arm comes down. Sure enough, many Skinner smiles later, Fromm is

JAMES F. COYLE

Skinner with pigeons at Harvard in 1951

sawing the air so vigorously that his wristwatch keeps slipping over his hand. A colleague, in on the game, passes Skinner a note: "Let's see you extinguish it." But Skinner fails to end Fromm's gesticulating, suggesting that people may not be pigeons after all.

Skinner frets about his handwriting, wonders whether he is too selfish, relives ancient academic squabbles, and plans his workdays to get the most out of his physical energy. He spends a good deal of time translating other people's prose–including portions of *Middlemarch*, a UNESCO statement and La Rochefoucauld's *Maxims*–into the jargon of behaviorism. He reads widely, but the humanities mean so little to him that he muses over the possibility of abolishing them. Even his daughters and his wife Eve are presented as obstacles in human engineering. "There is a problem doing things together," he once said of Eve. "I walk faster and longer than she. She needs entertainment (movies, TV, plays) that I can do very well without. What is a fair deal then? How much should be done to make her happy in spite of the fact that it will make me less happy?"

Though his concern for his daughters is obviously genuine, his parental comments seem stilted or reek of the lab. He writes, "Debbie has been raised with nearly a minimum of aversive control." And later, "Last year Debbie wholly failed to understand her relation to other children."

Occasionally Skinner's feelings poke through, like crocuses through snow. He is depressed by his enormous success and feels vaguely guilty and anxious. "Much of this is the result of losing control," he writes. "Writing a paper in the silence of my study–that is the only verbal behavior I can really trust." For the austere Skinner, who would bellow "Behave, damn you!" at his pigeons, control is a key issue. Toward the end of *Consequences*, referring to his grim mother and weak father, whom he described at length in the first volume of his autobiography, he writes, "My parents' control was so well sustained that I had no chance to learn to revolt . . . I was never quite free."

In 1953 Skinner told three graduate students, "If my theory survives 25 years, it will be amazing." Now he says that behaviorists are losing out on campus because so few jobs are available in experimental psychology, and because people who work with rats and pigeons in laboratories "are often not the most interesting people on the faculty." But he insists that his behaviorism "is the method of the analysis of behavior, which, I think, has no rival at the moment. It has completely displaced all of the other ways of studying behavior."

AP

Parents watch Debbie in Air-Crib

Skinner's insistence that behavior is more important than feelings has had its impact in child rearing and treatment of juvenile drug offenders. Drug-free centers like Phoenix House set up a system of rewards and punishments and insist that behavior change before psyches are plumbed with conventional insight therapies. But, in fact, recent scholarship has moved away from Skinner. Noam Chomsky's conclusion that the structure of language is innate was considered a major blow to behaviorism, which holds that the acquisition of language, like most behavior, is purely a reaction to the environment. Evidence suggests that biological disposition limits the laws of learning, implying that the innate is more significant than Skinnerism admits. Today most psychologists disagree with Skinner's supposition that human behavior can be explained by rewards and punishments. Says Psychologist Fergus Craik of the University of Toronto: "We are not content to accept Skinner's dictum that there is nothing going on in there in the mind."

Though his philosophy now seems remote, perhaps even quaint, Skinner defends it doggedly and repetitiously, constantly complaining that his critics have misunderstood. But he is determined to push on, breaking new ground. He is one of the most formidable minds ever devoted to the notion that mind itself is unimportant. Says Skinner: "I never assumed I was not like my pigeons."

*Debbie, a successful artist, is married and lives in London; her sister Julie, a professor of educational psychology at West Virginia University, brought up her two daughters in an Air-Crib.

December 23, 1985

A conference on the "Evolution of Psychotherapy" attracted just about every well-known therapist available. This summary article is jammed with familiar names and loaded with quotable lines.

A Therapist in Every Corner. "All the experts are here, and none of them agree," burbled a psychiatric nurse. She was one of 7,000 people who attended the Evolution of Psychotherapy Conference last week in Phoenix, which was billed by its organizers as "probably the largest gathering ever devoted to the practice of psychotherapy." Part trade show, part ecumenical conference, the meeting drew participants from 29 countries and dozens of therapeutic splinter groups. Jeffrey Zeig, the director of

Phoenix's Milton H. Erickson Foundation, which helped sponsor the event, counted 15 major schools of thought on the program, plus Thomas Szasz, a psychiatrist who does not believe that mental illness even exists.

Szasz met the venerable Freudian Bruno Bettelheim, 82, for the first time, patted him on the back and called him "one of the few people at this conference that I respect," thus indicating how far therapeutic ecumenism has to go. Among the other visiting stars who had never met were Human-Potential Guru Carl Rogers and Joseph Wolpe, one of the founders of behavior therapy. Wolpe found the talk about therapeutic unity resistible. Zeig, in his opening address, referred to "the great ballet of differences" in the field, but Wolpe called it a "babble of conflicting voices." Wolpe complained about the proliferating forms of alleged cures, "with a new crop every year from California." He plugged his own form of therapy as being scientific, adding the commonplace but wounding remark that there is only one science of chemistry because chemistry can prove something, whereas psychotherapy cannot.

Many of the conference's faculty members, which included such internationally known stars as Rollo May, Albert Ellis and R.D. Laing, said they were astonished by the turnout. All 7,000 participants needed to have a professional degree of some kind or at least be enrolled in a graduate program, and 3,000 applicants were turned away for lack of space. "Why are you all here?" Jay Haley, director of the Family Therapy Institute in Washington, plaintively asked one of the conventiongoers. "We want to see you all before you die" was the response. Other stars on hand included the grandchildren of such giants as Sigmund Freud, Carl Jung and Alfred Adler. Sophie Freud is a professor of social work at Simmons College in Boston; Dieter Baumann, a Jungian analyst in Zurich; and Margot Adler, a reporter for National Public Radio.

The problem of making sense of the field was painfully apparent during a panel on schizophrenia when three of the four members said that the disease was nonexistent. Family Therapist Carl Whitaker said, "The problem is that you have a disease, but the disease is abnormal integrity, loyalty to a view of the world that the schizophrenic is willing to stake his life on." Szasz saw schizophrenia as a "legal cultural fiction." Said he: "It's useful to Mr. and Mrs. Hinckley to think of their son as schizophrenic when he's really just a bum."

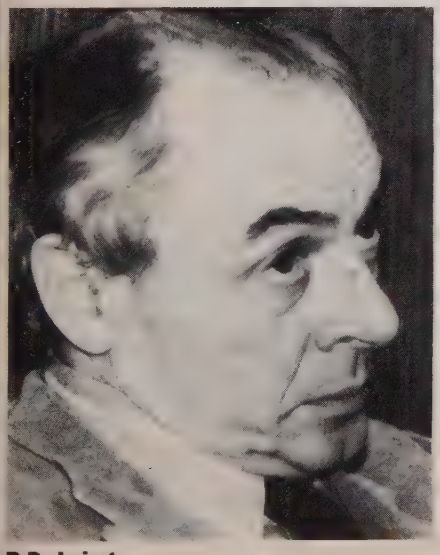
R.D. Laing, the favorite shrink of student rebels in the '60s, retains his romantic opinion of schizophrenics as brave victims who are defying a cruel culture. He suggested that many people are diagnosed as schizophrenic simply because they sleep during the day and stay awake at night. Schizophrenia did not exist until the word was invented, he said. That was too much for Judd Marmor, a former president of the American Psychiatric Association. He called the panel a "travesty." At a later panel, a woman in the audience asked Laing how he would deal with schizophrenics. Laing bobbed and weaved for 27 minutes and finally offered the only treatment possible for people he does not view as sick: "I treat them exactly the same way I treat anybody else. I conduct myself by the ordinary rules of courtesy and politeness."

Virginia Satir, a freewheeling family therapist in Palo Alto, Calif., was probably the top attraction, luring more than 2,200 to a workshop, a discussion of her techniques, which she illustrated with a videotape. Satir is a peppy speaker with murky ideas, who often opens a session by asking members of the audience to embrace those next to them. Said one colleague: "She can fill any auditorium in the country, but she has great difficulty conceptualizing."

Jay Haley spoke about his "shaggy-dog" technique: get the patient to make an absolute commitment to change, then guarantee a cure but do not tell the patient what it is for several weeks. "Once you postpone, you never lose them as patients," he said. "They have to find out what the cure is." One bulimic who ate in binges and threw up five to 25 times a day was told she would be cured if she gave the therapist a penny the first time she vomited and doubled the sum each time she threw up. Says Haley: "They quickly figure out that it doubles so fast that they can owe the therapist hundreds of thousands of dollars in a few days, so they stop."

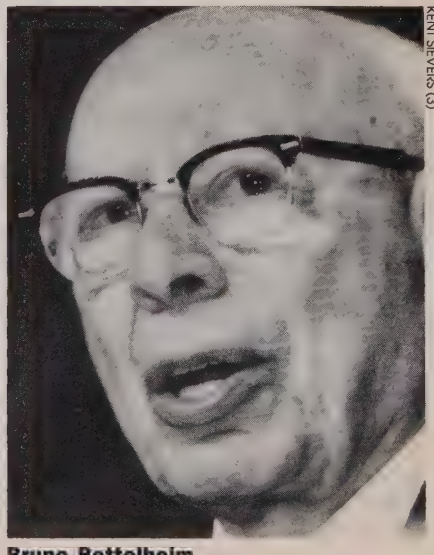
Zeig wisely urged the conference speakers to use English instead of professional jargon. Most complied, but there was still much talk of "accessing the self." The closest thing to a central idea was that the patient, or client, already has the answer to the problem deep within, and the therapist simply helps bring it out.

Zeig thought that the conference had helped produce some "baby steps" toward unifying the world of therapy. "Ten years ago," he said, "these people wouldn't even have sat down together." The obstacles to consensus may have been best illustrated at one contentious panel when the moderator tried to wrap things up by saying that at least everyone agreed on the need for honesty in therapy. Szasz, ever the ankle biter at conventions, interrupted to declare that many patients want dishonesty, and the therapeutic business ought to provide it.



R.D. Laing

Virginia Satir



Bruno Bettelheim

KENT SIEVERS (3)

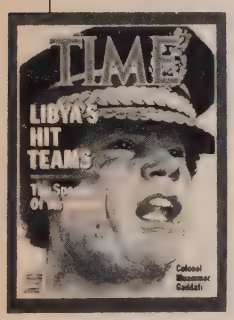
Snippets

Short articles and excerpts from TIME's coverage of psychology through the 1980s

February 11, 1980

Whether or not chimpanzees have been taught to communicate with language is an argument not yet settled. Certainly chimps can and do communicate a wide range of feelings and ideas. And they can be taught to use man-made symbols in the process. To show that using symbols provided by their human keepers did not prove that chimps had truly acquired language, B.F. Skinner and his students provide a demonstration of their own.

Skinner, with Robert Epstein and Robert Lanza, set up an experiment involving two white male pigeons whimsically dubbed Jack and Jill. Kept in adjoining Plexiglas cubicles, the pigeons were taught by Skinner's conditioning techniques to recognize and depress keys that were identifiable either by color or by words or symbols embossed on them. If they hit the right key with their beaks, it would light up and, as a reward, they automatically got a little grain.



Gaddafi, 1981

Finally Jack became skilled enough to initiate a "conversation" by depressing a key saying *What color?* Seeing Jack's key light up, Jill would promptly peek behind a curtain in his own cubicle. There, hidden from Jack's view, one of three bulbs (red, green and yellow) would light up. Having been taught to recognize the color, Jill, moving back in front of Jack, would depress a key identified by a letter representing that color. If Jill correctly chose red, for example, by pressing the *R* key, the key would light up, and Jack would react by depressing a *Thank you* key in his cubicle. That would give Jill a few grains of feed.

Reagan, 1984

Eager for his own reward, Jack would then look back at the illuminated symbol key in Jill's cubicle, recognize the *R*, and depress a red key in his cage. If he deciphered the symbol correctly, he too would get some grain. The birds repeated the cycle again and again with 90% accuracy–sometimes for several hours.

This somewhat satiric demonstration that mere bird brains are capable of "talk" suggests to the Harvard team that it is behavioral conditioning–not some unique characteristic of the brain–that enables pigeons, chimps, and even man, to learn symbolic conversation.

March 3, 1980

The obituary of J.B. Rhine:

Joseph Banks Rhine, 84, father of experimental parapsychology in America and coiner of the term extrasensory perception; in Hillsborough, N.C. Fascinated by psychic phenomena after hearing a 1922 lecture on the subject by Sherlock Holmes Creator Sir Arthur Conan Doyle, Rhine later helped establish one of the nation's first parapsychology laboratories, at Duke University. His 1934 book, *Extra-Sensory Perception*, documented laboratory-controlled demonstrations of clairvoyance and telepathy and made ESP a household term.

March 31, 1980

The obituary of Erich Fromm:

Erich Fromm, 79, German-born psychoanalyst and prolific social philosopher who applied the precepts of psychology to the study of this century's political, social and spiritual dilemmas; of a heart attack; in Muralto, Switzerland, his home for eleven years. Fromm began his practice in Berlin in 1925 as a dogmatically orthodox Freudian, but came to reject the passive, noncommittal role of the Freudian analyst and pioneered confrontational techniques now widely used by therapists. After emigrating from Nazi Germany to the U.S. in 1934, Fromm popularized his eclectic theories of human behavior as a lecturer at Columbia, Yale and other colleges. In *Escape from Freedom* (1941), he argued that fascism and compulsive social conformism were the outgrowths of alienating industrial development. In *The Art of Loving* (1956), he explored the nature and "redemptive power" of love; the book became a campus cult object in the '60s. Fromm's later works ranged over topics as diverse as Mexican village life, Marxism, the cold war and Zen Buddhism.

May 19, 1980

Two major stories seem to have emerged from the 1980 meeting of the American Psychiatric Association: demonstrations by feminists and the relationship between depression and REM sleep.

In demonstrations and caucuses, angry feminists denounced the association as male-dominated and hopelessly sexist. Gloria Steinem was there to push the cause, and Betty Friedan sent a message saying that she dreamed of the day when women would not need psychiatrists at all.

The immediate trigger for the feminist fury was the Equal Rights Amendment. Though many psychiatrists flaunted little ERA stickers on their name tags, A.P.A. members had voted last winter to drop the organization's boycott of states that had not ratified the amendment. That meant that next year's meeting would be held in non-ERA New Orleans. But the feminists, vowing to publicize the names of any psychiatrists who showed up in New Orleans, created such a clamor that one male doctor warned: "The A.P.A. is in big trouble."

One of the more interesting scientific sessions involved sleep and depression. It has long been known that depressed people have trouble staying asleep and tend to wake up early. And lately doctors have learned that they also launch earlier than normal people into the intense period of sleep characterized by rapid eye movements (REM) that occur under closed lids.

Nearly all the new research reports dealt with biochemistry and kindred disciplines. Faced with competition from nonmedical therapists, psychiatrists are clearly flocking back to their medical roots. In fact, the ERA furor provided the main relief from biology and chemistry.

September 29, 1980

In the fall of 1980, a "paid-up member of the American Psychiatric Association," Dr. James A. McDermott, won the Washington State Democratic primary for Governor. That piece of history prompted a TIME Essay by Roger Rosenblatt, titled "The People's Analyst."

Still, there are plenty of advantages besides image that a psychiatrist brings to the Governor's mansion:

■ *Nothing is unspeakable to a psychiatrist.* In fact, he appears shaken upon receiving good news.

■ *A psychiatrist takes everybody seriously.* This is bound to unnerve people like women and mayors, who have never been taken seriously before.

■ *A psychiatrist searches for underlying causes.* Warn him that students and garbage men are storming the statehouse, and he will ask: Why should this be?

■ *Psychiatrists are born reductionists.* As Robert Benchley put it, "Tell us your phobias, and we will tell you what you are afraid of."

■ *Psychiatrists believe that problems can be solved.* Not a way to reach the White House, of course, but charming nonetheless.

But the greatest gift psychiatrists could bring to government is the capacity to forgive. Until recently, only Barbara Walters had that power, but now with psychiatrists at the helm, all sins become venial. One would expect a psychiatrist Governor to exercise his right of pardoning condemned prisoners, of course, and that would be most pleasing to opponents of capital punishment. Only one area of danger exists, and that is in the traditional circumstance of a Governor's phoning the prison at the last minute to cancel the execution:

Warden (elated): Is this the Governor?

Governor: Would you like it to be the Governor?"

November 17, 1980

Although just a bit melodramatic, this short article on bulimia is timely and reasonable.

For dessert one night, Cynthia B. ate a candy bar, two bags of cookies, an éclair, three sandwiches, crackers and dip, a jar of peanut butter and half a jar of jelly, raisins and berries, two slices of bread with cheese and mayonnaise, a large pizza and four bowls of cereal. Then she made herself throw up.

Cynthia's eating binges, always followed by self-induced vomiting or heavy use of laxatives, are symptoms of bulimarexia (from the Greek words for ox and hunger), an eating disorder also known as gorge-purge syndrome and bulimia nervosa. Some bulimarectics gorge themselves four or five times a week, putting away 40,000 calories, then take 200 to 600 laxative pills. "To many of them, a day without binging is like a day without sunshine," says Health Educator Mary Ellen Shanesey of the University of Illinois. "They have chosen this way to handle stress, as alcoholics use alcohol."

Almost all of those afflicted are women–also true of the better-known eating disorder anorexia nervosa, the "starvation disease." Like anorectics, some bulimarectics seem to come from homes where food was important and therefore a focal point for power struggles and gibes about weight. Anorectics are mostly shy, withdrawn females who develop their symptoms around the onset of puberty. Bulimarectics tend to be extraverted, successful perfectionists who start the gorging behavior in their late teens, and often have trouble seeing their problem as more than an idiosyncrasy–one reason why it is so little known to the public. Anorectics are cadaverously thin, while bulimarectics generally weigh in at normal levels.

Dr. Craig Johnson, director of the Anorexia Nervosa Center at Chicago's Michael Reese Hospital and Medical Center, who is heading an epidemiological study of the disorder, estimates that "up to 20% of women on college campuses are involved in some degree in bulimia and purging." A study at Ohio State University produced an even higher estimate: 30%. Johnson reports some colleges have informal groups of women who "pig out" regularly in frantic feasting.

In group therapy, individual psychotherapy or behavior modification–the standard treatments–some women cut down on their binges, but so far cures are unknown. Says Shanesey: "If we could get them to binge-purge once every three weeks instead of four or five times a week, that would be a start." One of the few things known for certain about bulimarectics is that they hate to cook for friends. Reason: they are afraid that they will eat all the food before the guests arrive.

April 20, 1981

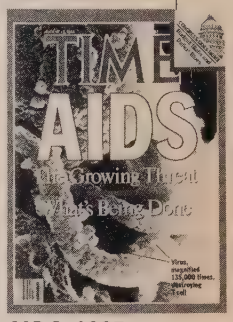
"Father of child psychiatry" might be more appropriate than "father of child psychology" in this obituary of Leo Kanner.

Leo Kanner, 86, recognized as the father of child psychology for being the first to describe early infantile autism, which also became known as Kanner syndrome, and for other pioneering work at the Johns Hopkins Children's Psychiatric Clinic, which he founded in 1930; in Sykesville, Md. Kanner wrote the classic textbook *Child Psychiatry* (1935) as well as more popular works on child rearing in which, for example, he urged mothers to regain the common sense that had "been yours before you allowed yourselves to be intimidated by would-be omniscient totalitarians."

May 18, 1981

The obituary of David Wechsler:

David Wechsler, 85, chief psychologist at New York City's Bellevue Hospital from 1932 to 1967 and the author of a series of widely used intelligence tests, including the Wechsler-Bellevue Intelligence Scale, the Wechsler Intelligence Scale for Children and the Wechsler Adult Intelligence Scale; in New York City. A critic of conventional IQ tests that measure only reasoning and logic, Wechsler argued that intelligence is actually made up of a variety of factors, including temperament, impulse and instinct.

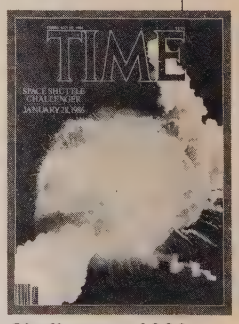


AIDS, 1985

August 3, 1981

The obituary of Abram Kardiner:

Abram Kardiner, 89, American psychoanalyst who in 1930 co-founded the New York Psychoanalytic Institute, the first psychiatric training school in the U.S., and was one of the last persons living to have been analyzed by Sigmund Freud; in Easton, Conn. A leader in the "environmental" school of psychiatry, which stresses the interplay of the psyche and culture, Kardiner once described Freud–his teacher and analyst in 1921–as both a "genius," and "a regular guy."



***Challenger*, 1986**

October 19, 1981

The obituary of Dexter Bullard:

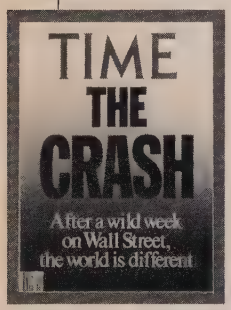
Dexter M. Bullard, 83, psychiatrist and medical director from 1931 to 1969 of the Chestnut Lodge mental hospital in Rockville, Md., which pioneered in the use of psychoanalytic treatment for psychotic patients, instead of custodial care; in Rockville. Chestnut Lodge, founded in

1910 by Bullard's father, Dr. Ernest Bullard, was the setting for the 1964 novel *I Never Promised You a Rose Garden*, by onetime Patient Joanne Greenberg.

May 17, 1982

In 1972 the Office of the Surgeon General of the United States issued a report linking violence on television to aggressive behavior. Ten years later, the National Institute of Mental Health formally entered the very active research area with a report of its own.

The two-year study, titled *Television and Behavior: Ten Years of Scientific Progress and Implications for the Eighties*, flatly states that there is now "overwhelming" evidence that "excessive" violence on television causes aggressive behavior in children. Designed to examine the overall effects of television on American society, the report goes on to call television a "violent form of entertainment." It does not give, however a precise definition of violence, whether in weekend cartoon shows or primetime adventures.



The Crash, 1987

Impetus for the new effort came from University of North Carolina Clinical Psychologist Eli A. Rubinstein, who worked on the 1972 study and was disappointed by its small impact on public opinion and network policy.

Network reaction to the report was quick and predictable. All three networks attacked the study.

June 7, 1982

The obituary of Harry Solomon:

Harry Solomon, 92, professor of psychiatry emeritus at Harvard Medical School and compassionate early champion of the deinstitutionalization of mentally ill patients; in Boston. As superintendent of the Massachusetts Mental Health Center from 1943 to 1958, Solomon humanized the treatment of the mentally ill by eliminating such practices as continuous restraints and overmedication.

September 6, 1982

TIME's PEOPLE section is generally reserved for celebrities of the Hollywood, New York and International set. Here, it chooses to quote B.F. Skinner:

B. F. Skinner, 78, behavioral psychologist, on how to maintain the powers of the mind into old age: "Leisure should be relaxing. You must risk the contempt of your younger acquaintances and freely admit that you read detective stories or watch Archie Bunker."

October 25, 1982

The obituary of Anna Freud:

Died. Anna Freud, 86, pioneer of child psychoanalysis, whose theories advanced the work of her famous father Sigmund; in London. She opposed those who advocated the analysis of pre-verbal children and emphasized the purposeful care of parents and teachers. Applying in practice what she asserted on paper (in eight eloquent volumes), the self-effacing Freud established the first day nursery in Vienna and trained a generation of followers at the celebrated Hampstead Child-Therapy Clinic in England. She habitually shunned publicity and deferred to the parent whom she nursed in life and steadfastly defended in death. "I didn't go to college," she once remarked, "but I had a wonderful father."

July 11, 1983

The obituary of Marion Monroe:

Marion Monroe, 85, child psychologist and co-author of the *Dick and Jane* schoolbooks, which instructed millions of U.S. children to "see Spot run" and to begin reading; in Long Beach, Calif. Written with the late William Gray and others, Monroe's classic primers were widely used from the 1930s until the early '70s, when educators began to favor a stronger phonics approach instead of the "look-say" learning method and to criticize the series' exclusively white middle-class characters.

March 5, 1984

What one paid for psychotherapy had been a matter between patient and therapist. But in the'80s, with medical costs outpacing inflation, institutionalized concern over the cost of health care was also felt by those who offered psychotherapy.

The five-year-old monitoring program... was the insurance industry's first attempt to bring the skyrocketing costs of psychotherapy under control by screening out some of the heaviest abusers of the system. Now such monitoring is becoming standard in private health plans. Thirty-one insurance companies have contracts with the American Psychological Association and the American Psychiatric Association. Under a "peer review" system, the associations supply the insurers with a panel of therapists, who recommend, for a fee of $30 to $35 each per case, whether benefits should be continued or terminated. In some cases the reviewers recommend a switch to a different kind of therapy. Last year the associations conducted 8,650 reviews at a cost of about $2 million.

Three kinds of cases are most likely to flag the computers of insurance companies: two or more therapeutic sessions a week; therapy lasting longer than six months; and psychoanalysis, an in-depth treatment that does not readily lend itself to the demands of insurance companies for specific goals and progress reports.

Peer reviewers think they are performing another service: weeding out some incompetent treatments. San Diego Psychologist Thomas MacSpeiden, who has been practicing peer review for six years, offers two examples: one therapist attempted to treat a brain-damaged child with high doses of sugar, and another tried to treat Alzheimer's disease with talk therapy. Says MacSpeiden: "Professionals can become loose in the head too."

October 15, 1984

The technical report of the NIMH on the prevalence of mental disorders was published in the *Archives of General Psychiatry*. Filled with jargon and statistics, the report is difficult to read and interpret. Coincident with the publication of the report, the NIMH felt that its data was so important that they held a news conference. Here is TIME's summary of the NIMH report:

Psychiatrists have long assumed that depression is the most common mental problem in the U.S. That assumption is wrong, according to a $15 million six-year survey on psychiatric ailments conducted by the National Institute of Mental Health (NIMH). Anxiety disorders, including phobias, panic disorders and obsessive-compulsive disorders, are the most widespread, say the survey results, afflicting 13.1 million Americans, or 8.3% of adults

18 years of age and over.

The study, by far the largest and most thorough of the 80-odd major surveys to take the psychic pulse of America since 1900, reports that during a given six-month period, one in five adults, or about 29 million people, suffers from mental problems. Only a fifth of those affected had recently sought professional help, mostly from general physicians rather than mental-health specialists.

The NIMH interviewers questioned nearly 10,000 people living in and around Baltimore, St. Louis and New Haven. The responses were fed into computers and checked against criteria for 13 or more mental disorders listed in the American Psychiatric Association's latest *Diagnostic and Statistical Manual of Mental Disorders*. Other sections of the survey, covering 2,500 institutionalized patients and some 6,000 people in Los Angeles and Durham, N.C., are expected to be released next year.

The survey found that women tend to suffer from phobias and depression, while men score significantly higher than women in the abuse of alcohol or dependence on drugs and in long-term antisocial behavior. When all disorders are taken into account, men and women are about equally troubled. Earlier surveys showed that women were more psychiatrically disabled and had more symptoms than men, possibly because women tend to seek help for depression and men tend to hide theirs with alcohol. The current survey found that women seek professional help twice as frequently as men.

Among the other NIMH findings:

- Between 29% and 38% of those interviewed at the three sites had experienced at least one psychiatric problem in their lifetime.
- Rates of disorder were far higher among those under 45. Abuse or dependence on alcohol and other drugs falls sharply after 44. Antisocial personality is a problem of those over 45.
- College graduates have far fewer ailments than non-college grads.
- For some unknown reason, the phobia rate was extremely high in Baltimore, while alcohol problems were highest in New Haven and St. Louis.
- Only 1% of those surveyed were suffering from some form of schizophrenia, and only half of these cases received professional help.

The finding that one of five American adults is troubled at any given time coincides roughly with the conclusions of earlier studies. The Midtown Manhattan study, done in the 1950s, reported that 23% of the population had severe disorders, and up to 80% had some mild level of impairment. The Stirling County study, completed in Nova Scotia in 1952, said that 57% of those interviewed had a disorder during a lifetime and 20% were in need of psychiatric attention at the time of the survey. "The most important thing is not what the overall rate is," says Dr. Darrel Regier, director of the NIMH survey, "but that we now know what the distribution of disorders is. This is establishing a baseline for future research."

December 2, 1985

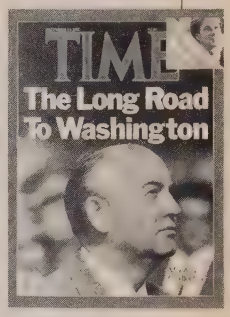
Putting together one source book that would list each and every psychological disorder, and would further list all its major symptoms is, at best, a very difficult task. The active feminism of the 1980s made the task even more difficult as the authors of just such a source book considered the inclusion of a disorder they were calling "masochistic personality disorder."

The women came to reason. But just in case reason did not suffice, they thought to mention the possibility of a massive lawsuit against the American Psychiatric Association, charging it with violating the civil rights of all women. The meeting was "very heated," according to its affable chairman, Psychiatrist Robert Spitzer, and in the end reason prevailed: "masochistic personality disorder," a red flag to feminist scholars for at least two decades, will not be an official diagnosis of American psychiatry after all. Instead, the proposed category will be known as "self-defeating personality disorder."

"They expected a fuss, but they didn't think the issue was important enough for the size of the fuss we made," said Denver Psychologist Lenore Walker. She was one of the seven feminist psychologists and psychiatrists who were invited to Manhattan last week, all expenses paid, to sit in on a closed meeting dealing with proposed revisions in psychiatry's diagnostic bible, the *Diagnostic and Statistical Manual of Mental Disorders* (Third Edition). *DSM-III* is of crucial importance to the profession. Its diagnoses are generally recognized by the courts, hospitals and insurance companies.

"At one point they offered us a deal," said Walker. "If we backed off on masochism, they would create a sadistic disorder to cover wife beaters." No deal. The group began to discuss a supposed hallmark of masochism, the willingness to endure pain. "Oh, you mean, like early-morning joggers?" inquired one of the feminists. "No, football players," said another; and a third chimed in, "What about high heels and girdles?" The hallmark was dropped. As compromise clauses hummed through the air, "we sat there horrified," said Walker.

Next week Spitzer and some of his colleagues will address two more highly charged issues, both of intense interest to feminists: proposed categories for premenstrual syndrome and for men who rape compulsively. Feminists, aghast at the possibility of a legal defense built around the new disorder of "paraphilic rapism," are likely to see that it remains no category at all.



Gorbachev, 1987

May 26, 1986

Evaluating the effectiveness of psychotherapy is demonstrably difficult to do. The subtitle of this article is "NIMH study shows psychotherapy lifts depression." Here are the first two paragraphs:

Many psychotherapists, perhaps most, believe that 1) talk therapy certainly works, but 2) no one will ever be able to prove it. Studies designed to demonstrate the effectiveness of psychotherapies have often bogged down in procedural squabbles and in doubts that anything remotely scientific can rise from such a subjective field. But now therapists have something to cheer about: a six-year, $10 million effort concluding that talk therapy can be just as good as drug therapy in treating depression. Exultant scientists at the National Institute of Mental Health, which funded the project, hail it as a "landmark," and Psychiatrist Jerome Frank calls it the "standard against which all other psychotherapy research will be assessed." Says Herbert Pardes, former director of NIMH: "It is unique in terms of size and the elegance of its construction."

Some 240 patients and 28 therapists are involved in the ongoing project at three sites: the University of Pittsburgh; the University of Oklahoma in Oklahoma City; and George Washington University in Washington. The study compares the effectiveness of two forms of brief psychotherapy with treatment by a standard antidepressant drug, imipramine. The drug got quicker results, but the talk therapies caught up after three months. By the end of the 16-week test period, all three treatments had eliminated serious symptoms of depression in more than half the patients.

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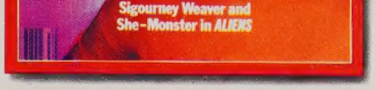

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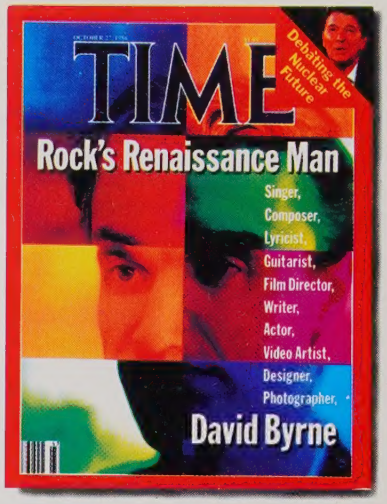

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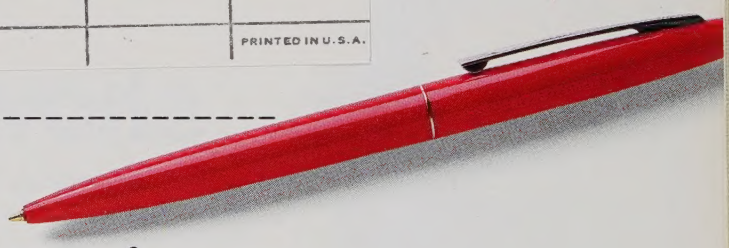

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